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GRADING AND DRAINAGE NOTES (C.O.P.)

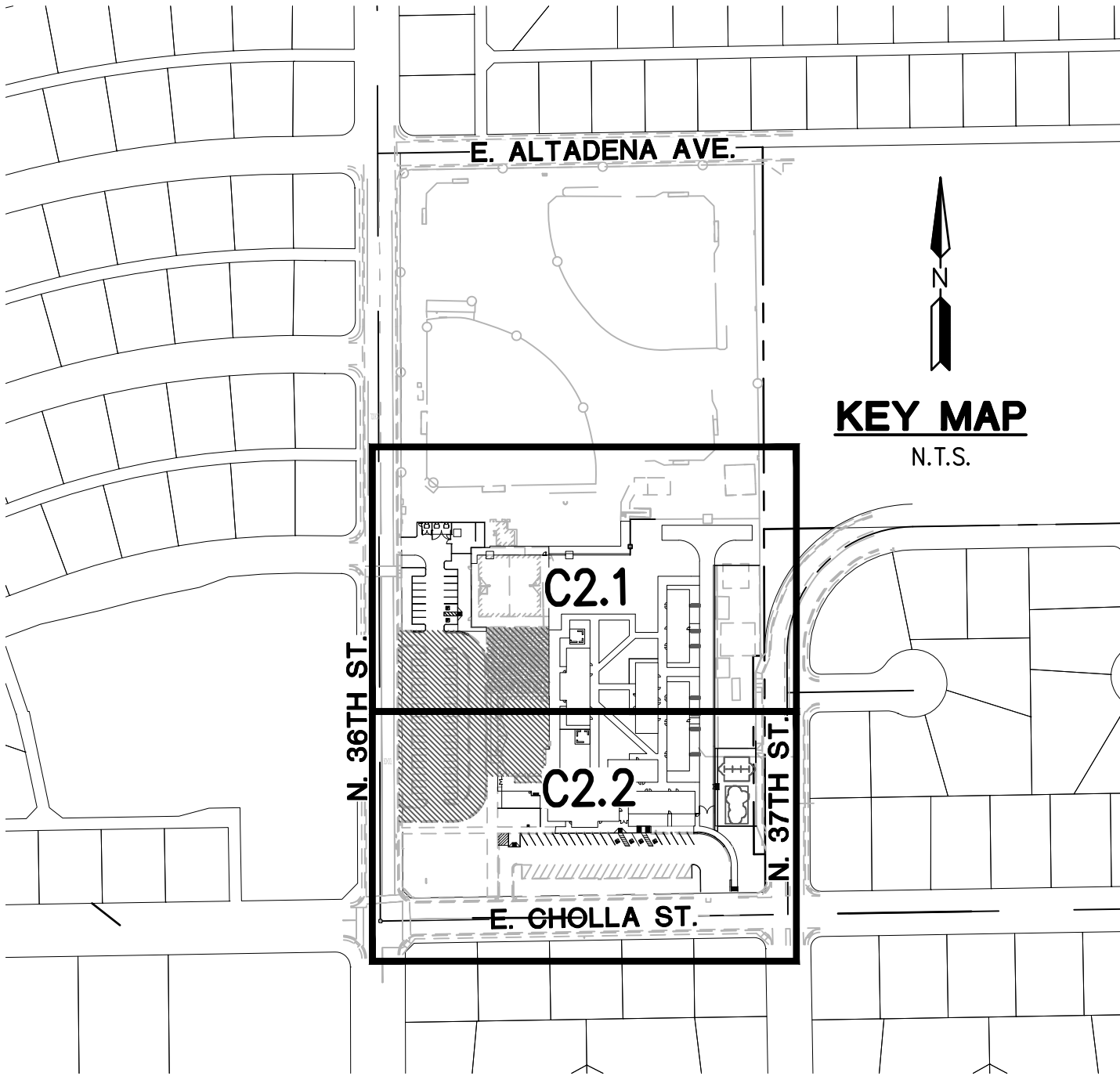
1. A GRADING PERMIT IS REQUIRED UNDER CHAPTER 32A OF THE PHOENIX CITY CODE.
2. WHEN HAUL PERMITS ARE REQUIRED, THEY MUST BE OBTAINED PRIOR TO OR CONCURRENTLY WITH THE GRADING AND DRAINAGE PERMIT.
3. EXCAVATING CONTRACTOR MUST GIVE LOCATION FOR WASTING EXCESS EXCAVATION AND A LETTER FROM OWNER GIVING PERMISSION FOR DUMPING PRIOR TO STARTING ON-SITE CONSTRUCTION. IF EXCESS EXCAVATION EXCEEDS 100 CUBIC YARDS, THE DISPOSAL SITE WILL ALSO REQUIRE A GRADING AND DRAINAGE PERMIT.
4. PLANNING & DEVELOPMENT DEPARTMENT FIELD INSPECTION GROUP SHALL BE NOTIFIED 48 HOURS BEFORE ANY ON-SITE AND/OR OFF-SITE CONSTRUCTION BEGINS, TELEPHONE (602) 262-7811.
5. STAKING PAD ELEVATIONS IS THE RESPONSIBILITY OF THE OWNER AND HIS ENGINEER. THE OWNER'S ENGINEER SHALL SUBMIT THREE SEALED COPIES OF THIS GRADING AND DRAINAGE PLAN DESIGNATED AS "RECORD DRAWING" (BEARING AN ORIGINAL SIGNATURE) PRIOR TO THE REQUEST FOR FINAL INSPECTION.
6. PAD CERTIFICATIONS WILL BE REQUIRED ON ALL LOTS WITHIN THE SUBDIVISION AND SUBMITTED TO THE CIVIL/SITE INSPECTOR PRIOR TO ANY CONCRETE CONSTRUCTED IN THE RIGHT-OF-WAY. PAD CERTIFICATION CAN BE SUBMITTED TO THE CIVIL/SITE INSPECTOR BY EITHER SUBMITTING ONE APPROVED BLACK-LINE AS-BUILT GRADING AND DRAINAGE PLAN OR IN LETTER FORMAT SHOWING THE DESIGN AND AS-BUILT PAD ELEVATIONS AS SHOWN ON THE APPROVED GRADING AND DRAINAGE PLAN. IT IS REQUIRED THAT THE AS-BUILT PLAN AND LETTER BE SEALED BY A CIVIL ENGINEER OR LAND SURVEYOR REGISTERED IN THE STATE OF ARIZONA.
7. A SEPARATE PERMIT IS NECESSARY FOR ANY OFFSITE CONSTRUCTION.
8. AN APPROVED GRADING AND DRAINAGE PLAN SHALL BE ON THE JOB SITE AT ALL TIMES. DEVIATIONS FROM THE PLAN MUST BE PRECEDED BY AN APPROVED PLAN REVISION.
9. GRADING AND DRAINAGE PLAN APPROVAL INCLUDES THE CONSTRUCTION OF ALL SURFACE IMPROVEMENTS SHOWN ON THE APPROVED PLAN, INCLUDING, BUT NOT LIMITED TO, RETENTION AREAS, SEDIMENTATION BASINS, AND/OR OTHER DRAINAGE FACILITIES, DRAINAGE PATTERNS, WALLS, CURBS, ASPHALT PAVEMENT, AND BUILDING FLOOR ELEVATION.
10. GRADES SHOWN IN RETENTION BASINS ARE DESIGN FINISHED GRADES. SHOULD THE CONTRACTOR OR ANY SUB-CONTRACTOR PLAN TO PLACE SPOIL DIRT FROM FOOTINGS, UTILITY TRENCHES, LANDSCAPING, SWIMMING POOLS, ETC. IN THE BASINS, THE BASINS SHOULD BE SUFFICIENTLY OVER-EXCAVATED DURING THE ROUGH GRADING OPERATION TO ALLOW FOR THE PLACEMENT OF THE FILL OR LANDSCAPING MATERIALS.
11. CONTRACTOR IS RESPONSIBLE FOR LOCATING AND CONFIRMING DEPTHS OF ALL THE EXISTING UTILITY LINES WITHIN PROPOSED RETENTION BASIN AREAS. IF THE BASIN CANNOT BE CONSTRUCTED PER PLAN BECAUSE OF CONFLICTS, THE CONTRACTOR SHOULD DISCUSS MODIFICATION OF BASIN CONFIGURATION WITH THE CITY INSPECTOR TO DETERMINE IF A PLAN REVISION OR A FIELD CHANGE IS REQUIRED.
12. ALL DRAINAGE PROTECTIVE DEVICES SUCH AS SWALES, INTERCEPTOR DITCHES, PIPES, PROTECTIVE BERMS, BARRIER WALLS, CONCRETE CHANNELS, OR OTHER MEASURES DESIGNED TO PROTECT ADJACENT BUILDINGS OR PROPERTY FROM STORM RUNOFF MUST BE COMPLETED PRIOR TO BUILDING CONSTRUCTION.
13. PER SECTION 6.8.7 OF THE CITY OF PHOENIX STORM WATER POLICIES AND STANDARDS, SIDE SLOPES OF STORM WATER STORAGE FACILITIES SHALL BE NO STEEPER THAN 5:1 FOR IRRIGATED GRASS AREAS AND 3:1 FOR LANDSCAPE AREAS. SLOPE STABILIZATION MEASURES ARE REQUIRED FOR ALL SLOPES GREATER THAN 5:1. THE SLOPE STABILIZATION MEASURES MUST BE READILY MAINTAINABLE USING COMMON MAINTENANCE EQUIPMENT AND BE DESIGNED WITH CONSIDERATION TO AESTHETICS. THE SLOPE STABILIZATION MEASURES SHALL BE CONSISTENT WITH COMMONLY USED ENGINEERING PRACTICES. UN-STABILIZED DECOMPOSED GRANITE IS NOT ALLOWED ON SLOPES GREATER THAN 5:1.
14. ALL RETAINING WALLS ARE TO BE REVIEWED, PERMITTED, AND INSPECTED BY THE BUILDING SAFETY BRANCH OF THE PLANNING & DEVELOPMENT DEPARTMENT. ALL RETAINING WALLS ARE TO BE IN ACCORDANCE WITH SECTION 703 OF THE ZONING ORDINANCE AND SECTION 32-32 OF THE SUBDIVISION ORDINANCE FOR SPECIFIC WALL HEIGHT REQUIREMENTS.
15. ALL RAMPS MUST MEET 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN AND CITY OF PHOENIX SUPPLEMENT TO M.A.G. UNIFORM STANDARD SPECIFICATIONS AND DETAILS; 2% MAX CROSS SLOPES AND 12:1 MAX LONGITUDINAL SLOPES.
16. CERTIFICATE OF OCCUPANCY (C OF O) AND/OR FINAL ELECTRICAL CLEARANCE FOR ANY BUILDING IS DENIED UNTIL ALL GRADING AND DRAINAGE IMPROVEMENTS ARE COMPLETED.
17. EXISTING OR NEWLY DAMAGED AND/OR DISPLACED CONCRETE CURB, GUTTER, SIDEWALK, OR DRIVEWAY SLAB THAT IS WITHIN THE RIGHT-OF-WAY SHALL BE REPAIRED OR REPLACED, AS NOTED BY CITY INSPECTORS, BEFORE FINAL ACCEPTANCE OF THE WORK.
18. THE ENGINEERING DESIGN ON THESE PLANS IS ONLY APPROVED BY THE CITY IN SCOPE AND NOT IN DETAIL. CONSTRUCTION QUANTITIES ON THESE PLANS ARE NOT VERIFIED BY THE CITY. APPROVAL OF THESE PLANS ARE FOR PERMIT PURPOSES ONLY AND SHALL NOT PREVENT THE CITY FROM REQUIRING CORRECTION OF ERRORS IN THE PLANS WHERE SUCH ERRORS ARE SUBSEQUENTLY FOUND TO BE IN VIOLATION OF ANY LAW, ORDINANCE, HEALTH, SAFETY, OR OTHER DESIGN ISSUES.
19. THE CITY OF PHOENIX POLICE DEPARTMENT ENFORCES LAWS REGULATING THE OPERATION OF COMMERCIAL VEHICLES. THIS INCLUDES ENFORCEMENT OF FEDERAL, STATE, COUNTY AND LOCAL LAWS AND ORDINANCES. QUESTIONS REGARDING COMMERCIAL VEHICLE ENFORCEMENT MAY BE DIRECTED TO THE COMMERCIAL VEHICLE ENFORCEMENT SUPERVISOR AT (602) 495-7813 (TRAFFIC BUREAU SOUTH) OR (602) 495-6784 (TRAFFIC BUREAU NORTH)
20. PLAN APPROVAL IS VALID FOR 12 MONTHS. PRIOR TO PLAN APPROVAL EXPIRATION, ALL ASSOCIATED PERMITS SHALL BE PURCHASED OR THE PLANS SHALL BE RESUBMITTED FOR EXTENSION OF PLAN APPROVAL. THE EXPIRATION, EXTENSION, AND REINSTATEMENT OF CIVIL ENGINEERING PLANS AND PERMITS SHALL FOLLOW THE SAME GUIDELINES AS THOSE INDICATED IN THE PHOENIX BUILDING CONSTRUCTION CODE ADMINISTRATIVE PROVISIONS SECTION 105.3 FOR BUILDING PERMITS.

THIS SET OF CONSTRUCTION PLANS HAVE BEEN SUBMITTED TO THE FOLLOWING UTILITY COMPANIES FOR REVIEW AND TO DETERMINE ANY POTENTIAL CONFLICTS.

UTILITY COMPANY	COMPANY CONTACT	DATE SUBMITTED
SOUTHWEST GAS CORPORATION	CONFLICT REVIEW	10/07/20
COX COMMUNICATIONS	TRAFFIC MGMT. CENTER	10/07/20
ARIZONA PUBLIC SERVICE	CONFLICT REVIEW	10/07/20
CENTURY LINK	CONFLICT REVIEW	10/07/20
ZAYO	CONFLICT REVIEW	10/07/20

GRADING & DRAINAGE PLAN
ROADRUNNER SCHOOL - PVUSD
PHOENIX, ARIZONA 85028

A PORTION OF THE NORTHEAST QUARTER OF SECTION 24, TOWNSHIP 3 NORTH, RANGE 3 EAST
OF THE GILA AND SALT RIVER MERIDIAN, MARICOPA COUNTY, ARIZONA



SITE AREA

LOT AREA GROSS: 518,834 S.F. 11.91 ACRES
LOT AREA NET: 473,586 S.F. 10.87 ACRES

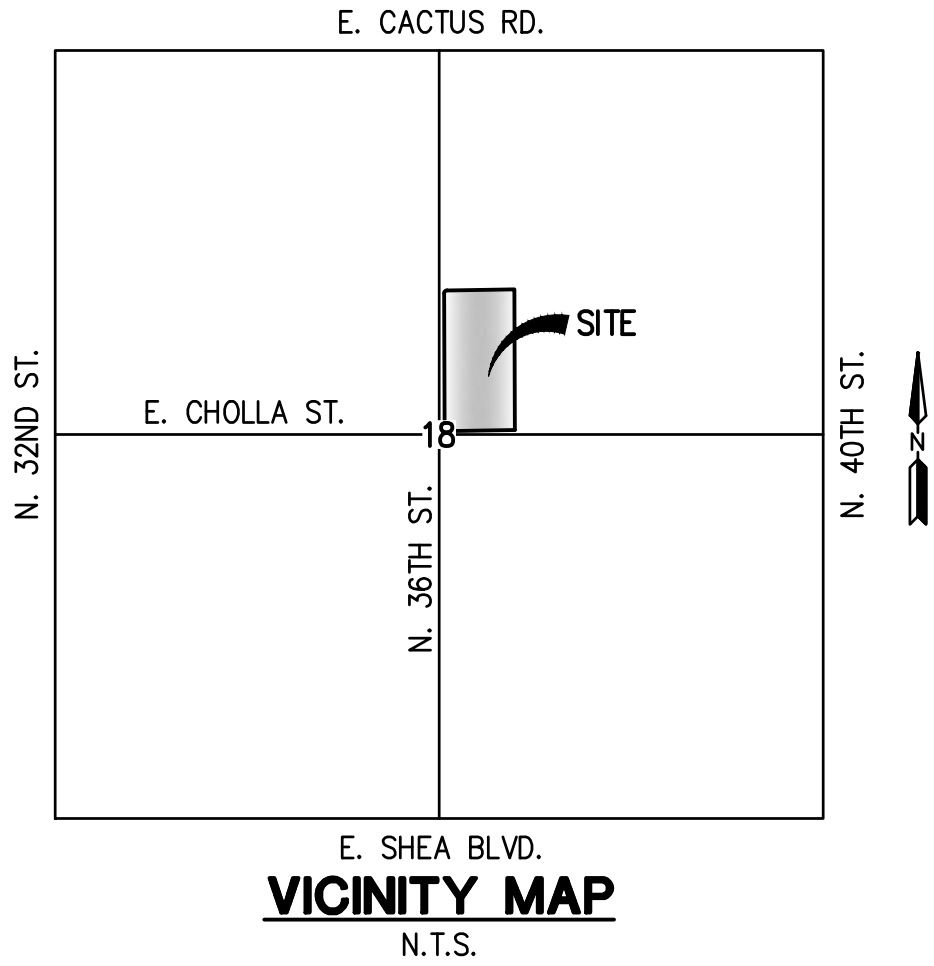
DISTURBED AREA

154,354 3.54 ACRES

SHEET INDEX

C1.0	GRADING AND DRAINAGE PLAN – COVER SHEET
C1.1	NOTES AND DETAILS
C1.2	CROSS SECTIONS
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C1.4	STORM DRAIN DETAILS
C2.0	OVERALL GRADING AND DRAINAGE PLAN
C2.1 – C2.2	GRADING AND DRAINAGE PLAN

* "SHEET FOR REFERENCE ONLY"



OWNER

PARADISE VALLEY SCHOOL DISTRICT
20621 N. 32ND ST.
PHOENIX, ARIZONA 85050
PH: (602) 449-2260
CONTACT: LES THOMPSON

ARCHITECT

SPS+ ARCHITECTS, LLP
8681 E. VIA DE NEGOCIO
SCOTTSDALE, AZ 85258
PH: (480) 991-0800
FAX: (480) 991-2623
CONTACT: DARLENE CADMAN

ENGINEER

HILGARTWILSON
1830 N. 95TH AVE. SUITE 110
PHOENIX, ARIZONA 85016
PHONE: (623) 248-3456
FAX: (602) 368-2436
CONTACT: LOGAN HOPP

BENCHMARK

BENCHMARK IS A FOUND 3" CITY OF PHOENIX BRASS CAP IN HAND HOLE, DOWN 12", LOCATED AT THE SOUTHWEST CORNER OF SECTION 24, TOWNSHIP 3 NORTH, RANGE 3 EAST OF THE GILA AND SALT RIVER MERIDIAN, MARICOPA COUNTY, ARIZONA. CITY OF PHOENIX BENCHMARK
ELEVATION: 1402.723'
DATUM: NGVD29

LEGAL DESCRIPTION

LOCATED IN A PORTION OF THE NORTHEAST QUARTER OF SECTION 24, TOWNSHIP 3 NORTH, RANGE 3 EAST OF THE GILA AND SALT RIVER MERIDIAN, MARICOPA COUNTY, ARIZONA

PROJECT DESCRIPTION

REMOVAL OF EXISTING BUILDING AND CONSTRUCTION OF 7 NEW BUILDINGS. NEW STORM DRAIN TO BE INSTALLED WITH NEW BUILDINGS.

FLOOD ZONE DESIGNATION

FEDERAL EMERGENCY AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) COVERAGE FOR THE PROJECT ON FIRM PANEL 04013C1755L (FEMA, OCTOBER 16, 2013). ACCORDING TO THIS FIRM THE PROJECT RESIDES ENTIRELY WITHIN A FLOOD HAZARD ZONE X. FEMA DEFINES THIS FLOOD HAZARD ZONE AS FOLLOWS:
AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD.

AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE "RECORD DRAWING" MEASUREMENTS AS SHOWN HEREON WERE MADE UNDER MY SUPERVISION OR AS NOTED AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED ENGINEER/LAND SURVEYOR

DATE

REGISTRATION NUMBER

TRACKING NUMBERS:

KIVA#
SDEV#
CPGD#
Q.S.# 30-36



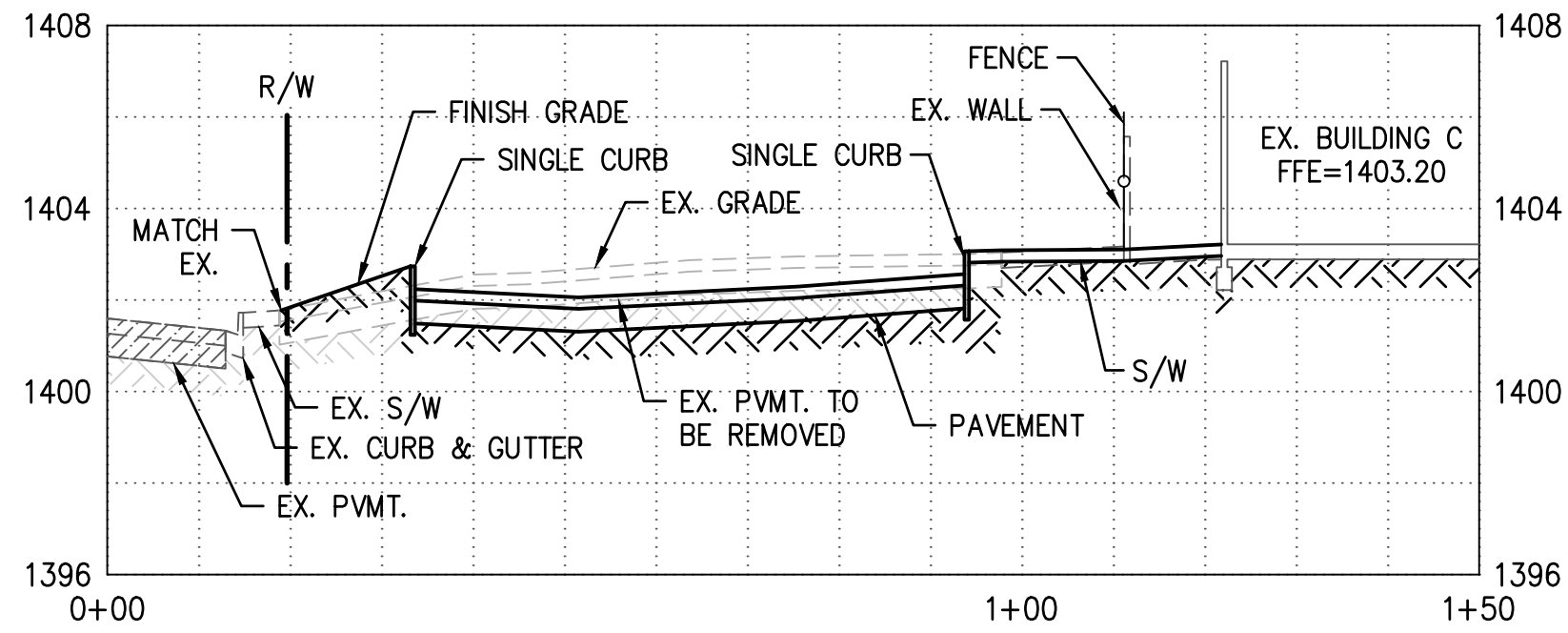
ROADRUNNER SCHOOL - PVUSD

3602 E. CHOLLA ST.
PHOENIX, ARIZONA 85028

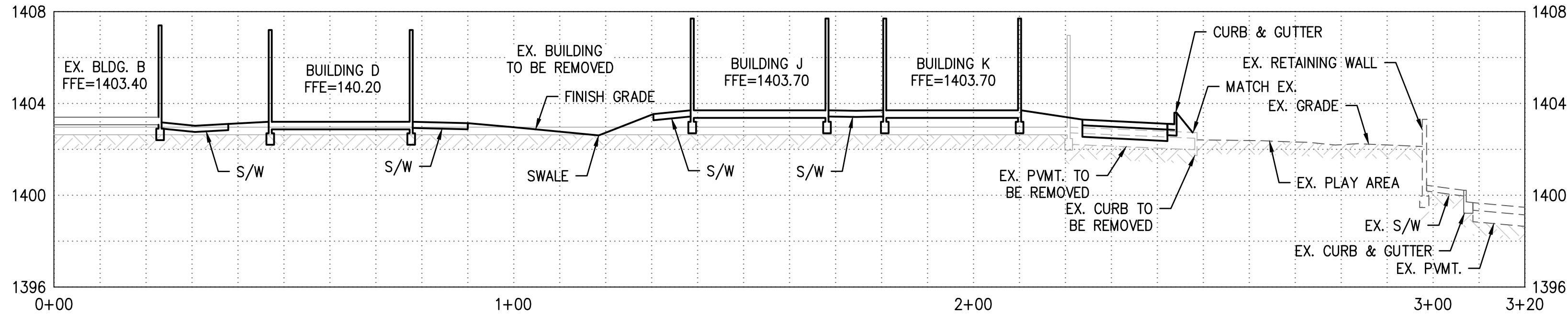
GRADING AND DRAINAGE PLAN – COVER SHEET

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			DWG. NO.			
			C1.0			
			SHT. 1 OF 8			

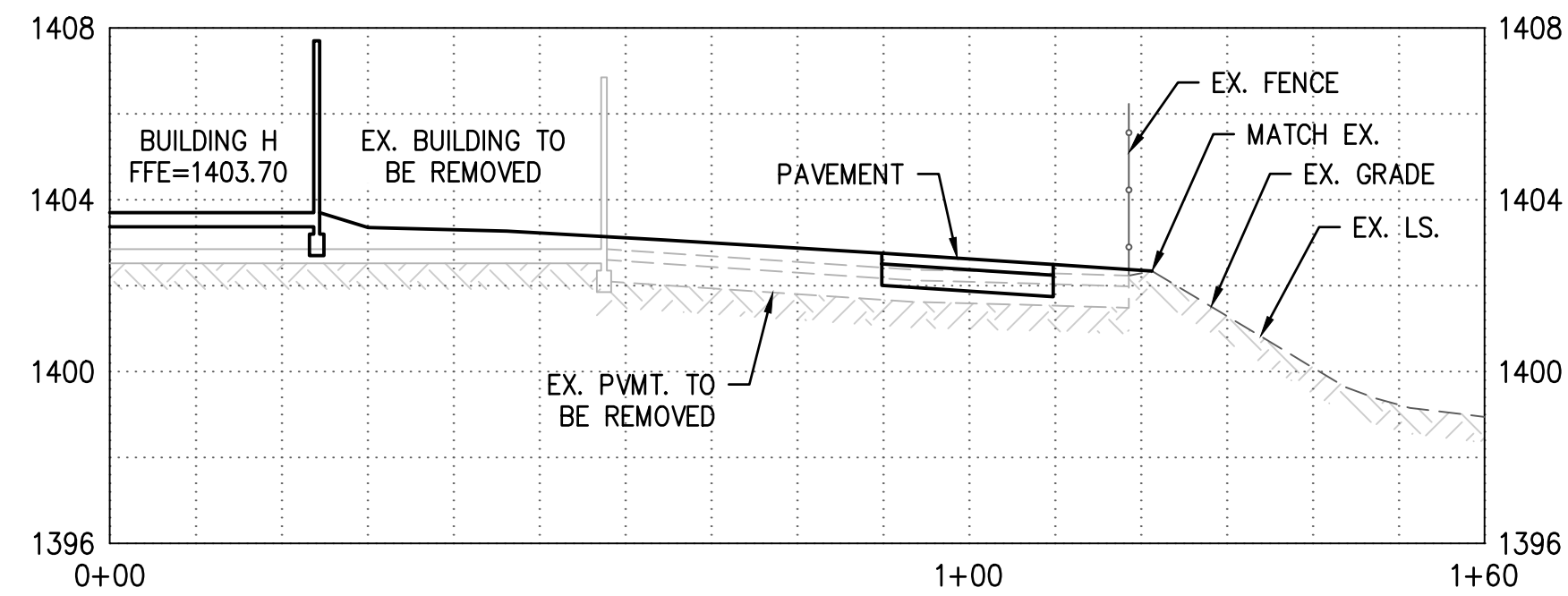
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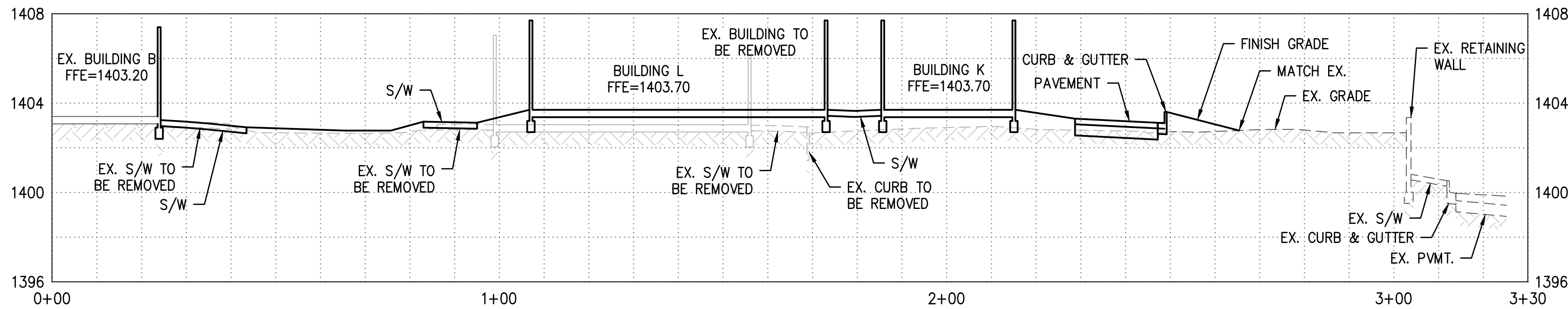
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N.T.S.



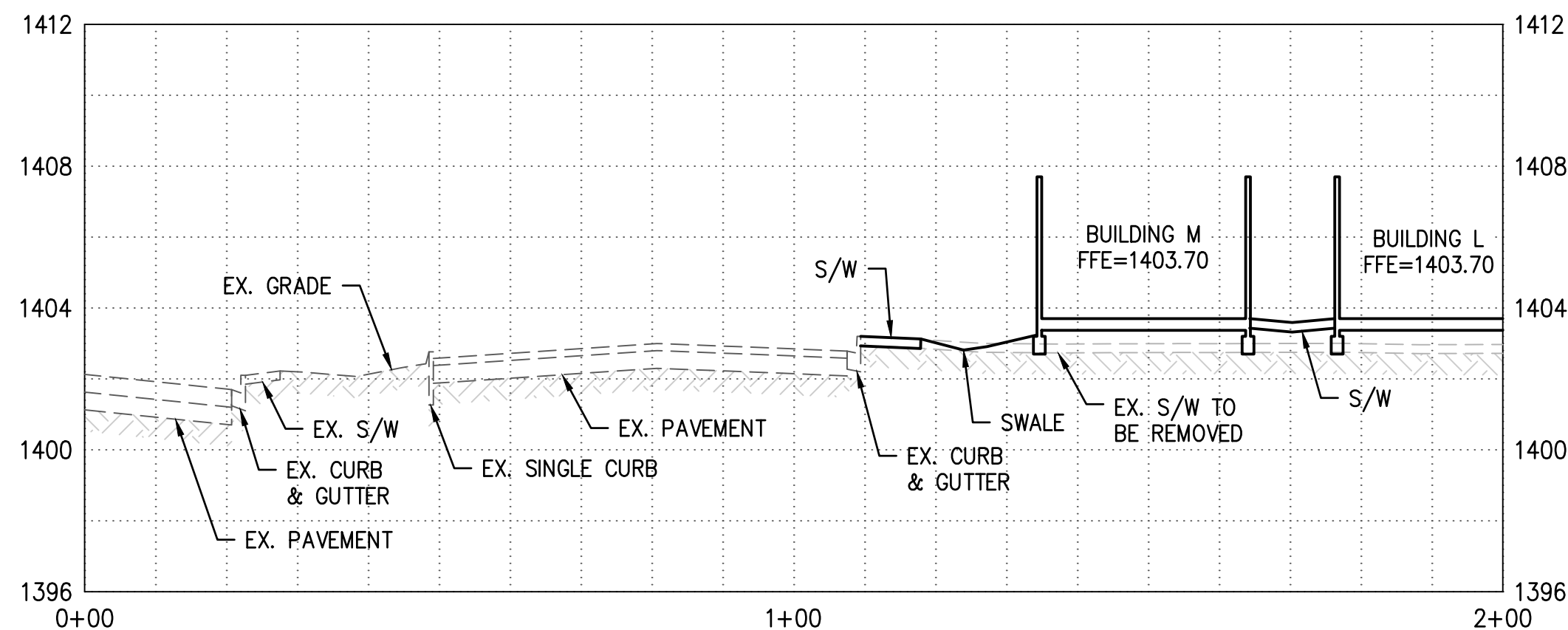
SECTION B-B
N.T.S.



SECTION C-C
N.T.S.



SECTION D-D
N.T.S.



SECTION E-E
N.T.S.



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KIVA#
SDEV#
CPGD#
Q.S.# 30-36

ROADRUNNER SCHOOL - PVUSD
3602 E. CHOLLA ST.
PHOENIX, ARIZONA 85028

CROSS SECTIONS

PROJ. NO. 2242.01
DATE: OCT 2020
SCALE: N.T.S.



DESIGNED: DB DRAWN: CM APPROVED: LH

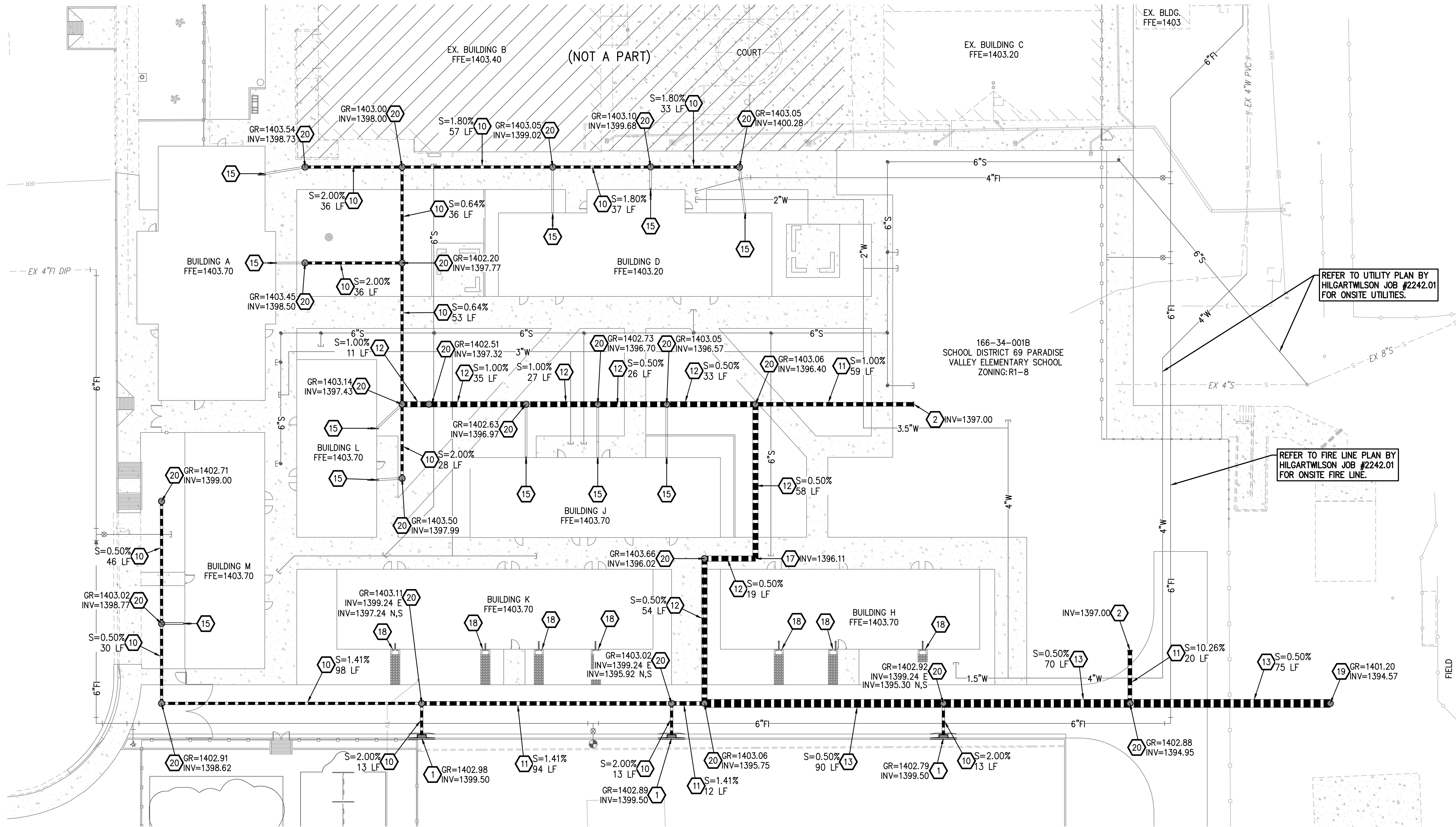
REV.

DWG. NO.

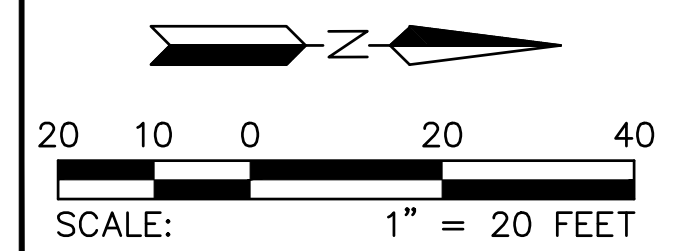
C1.2

SHT. 3 OF 8

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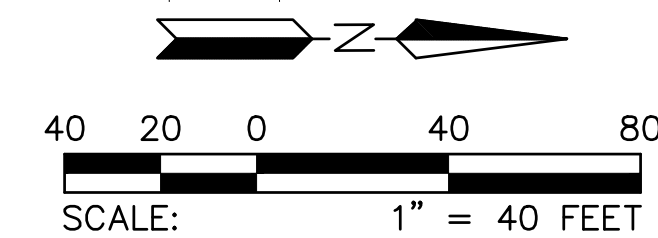
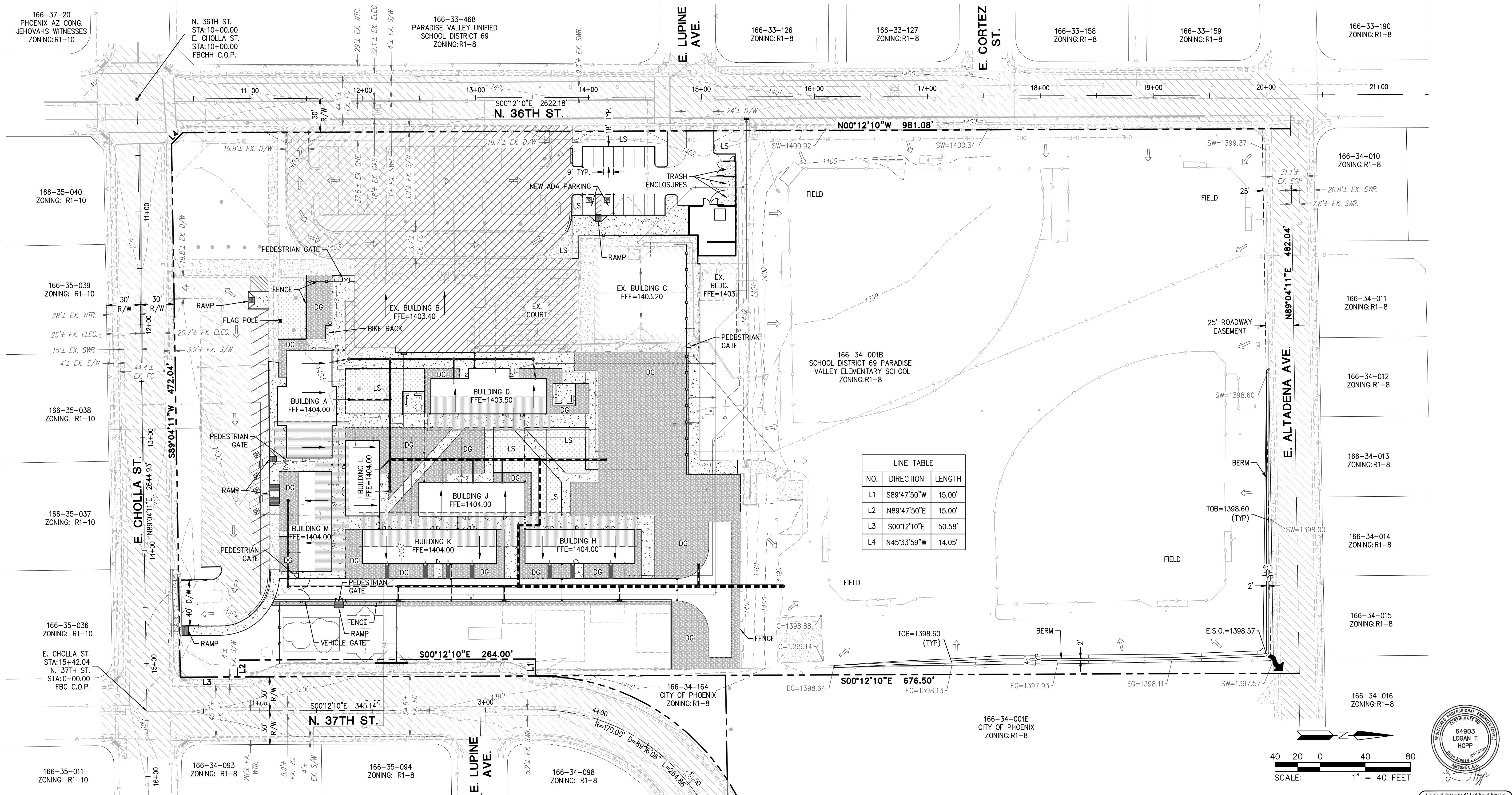
STORM DRAIN CONSTRUCTION NOTES		
1	CONSTRUCT CATCH BASIN PER MAG STD DTL 534-1 TYPE 'E'.	3 EA
2	INSTALL STORM DRAIN PLUG.	2 EA
10	INSTALL 12" HDPE STORM DRAIN PIPE PER MAG SPEC. 738 AND BACKFILL AND COMPACTION PER MAG SPEC 601. INSTALL WATER TIGHT JOINTS AND STRUCTURE CONNECTIONS PER MAG SPEC. 738.4 AND 7.83.1.	513 LF
11	INSTALL 18" HDPE STORM DRAIN PIPE PER MAG SPEC. 738 AND BACKFILL AND COMPACTION PER MAG SPEC 601. INSTALL WATER TIGHT JOINTS AND STRUCTURE CONNECTIONS PER MAG SPEC. 738.4 AND 7.83.1.	165 LF
12	INSTALL 24" HDPE STORM DRAIN PIPE PER MAG SPEC. 738 AND BACKFILL AND COMPACTION PER MAG SPEC 601. INSTALL WATER TIGHT JOINTS AND STRUCTURE CONNECTIONS PER MAG SPEC. 738.4 AND 7.83.1.	263 LF
13	INSTALL 36" HDPE STORM DRAIN PIPE PER MAG SPEC. 738 AND BACKFILL AND COMPACTION PER MAG SPEC 601. INSTALL WATER TIGHT JOINTS AND STRUCTURE CONNECTIONS PER MAG SPEC. 738.4 AND 7.83.1.	235 LF
15	SEE PLUMBING PLAN FOR CONTINUATION.	11 EA
17	INSTALL HDPE 90° BEND.	1 EA
18	INSTALL SPLASH PAD WITH RIP RAP PER DETAIL 7 ON SHEET C1.1.	7 EA
19	CONSTRUCT BUBBLER BOX PER DETAIL 6 ON SHEET C1.1.	1 EA
20	INSTALL NYLOPLAST HDPE DRAIN BASIN WITH PEDESTRIAN RATED GRATE.	23 EA



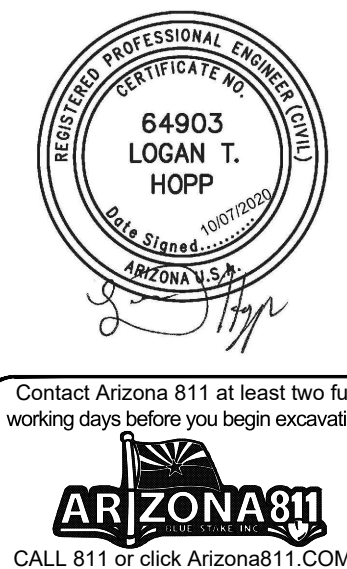
TRACKING NUMBERS:
KIVA#
SDEV#
CPGD#
Q.S.# 30-36



ROADRUNNER SCHOOL - PVUSD		
3602 E. CHOLLA ST. PHOENIX, ARIZONA 85028		
STORM DRAIN DETAILS		
PROJ. NO.	2242.01	 HILGARTWILSON
DATE:	OCT 2020	
SCALE:	1"=20'	
DESIGNED: DB	DRAWN: CM	
REV.		DWG. NO.
		C1.4
		SHT. 5 OF 8

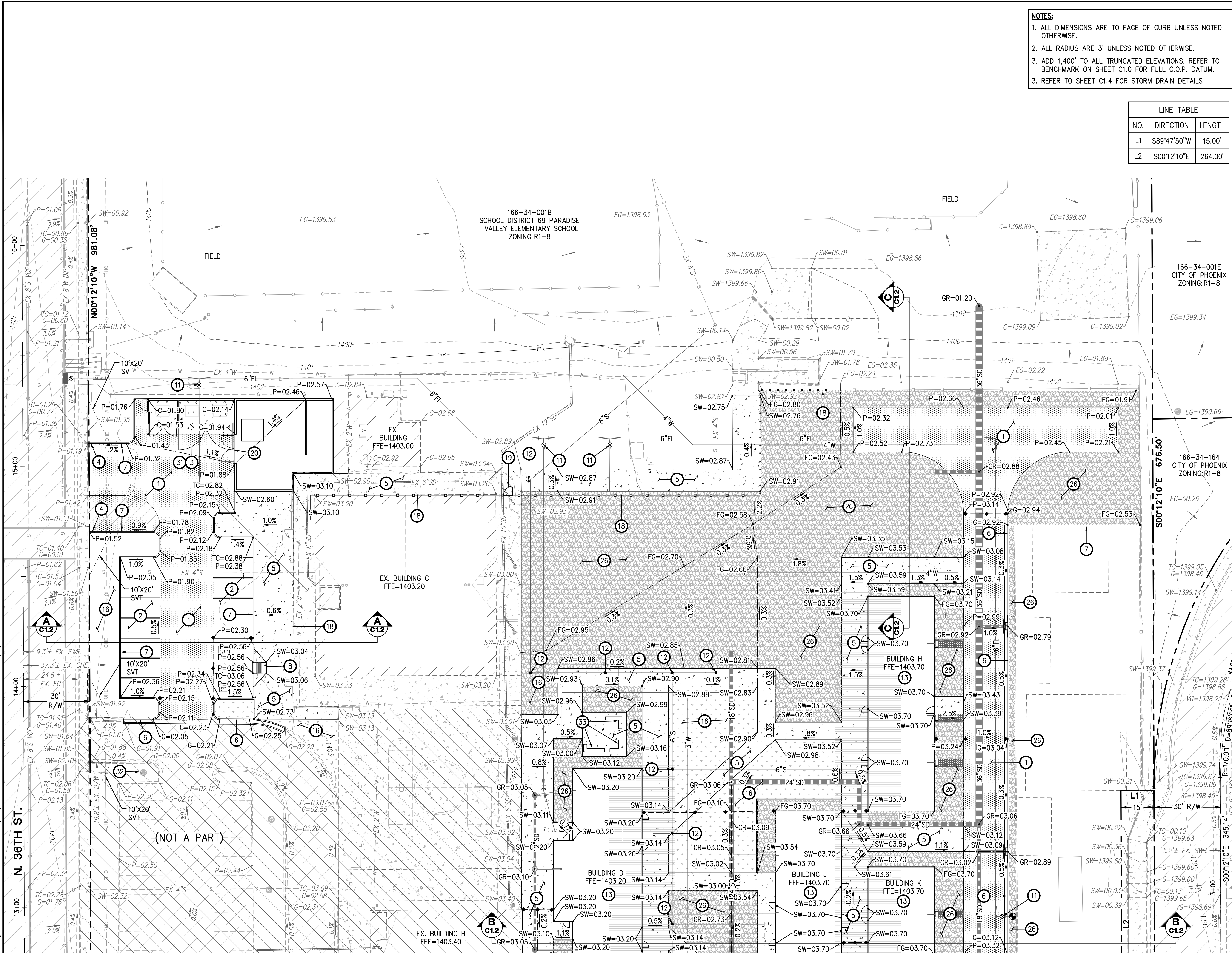


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KIVA#
SDEV#
CPGD#
Q.S.# 30-36



ROADRUNNER SCHOOL - PVUSD 3602 E. CHOLLA ST. PHOENIX, ARIZONA 85028	
OVERALL GRADING & DRAINAGE PLAN	
PROJ. NO.	2242.01
DATE:	OCT 2020
SCALE:	1" = 40'
DESIGNED: DB	DRAWN: CM
APPROVED: LH	DWG. NO.
C2.0	
SHT. 4 OF 8	

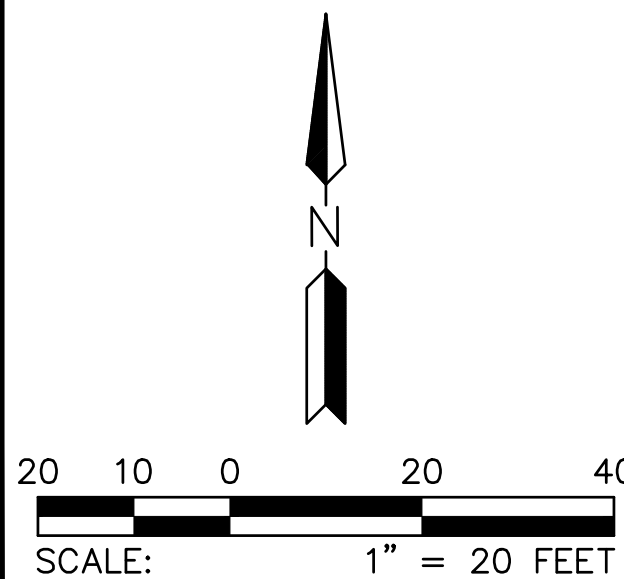
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- NOTES:**
1. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS NOTED OTHERWISE.
 2. ALL RADIUS ARE 3' UNLESS NOTED OTHERWISE.
 3. ADD 1,400' TO ALL TRUNCATED ELEVATIONS. REFER TO BENCHMARK ON SHEET C1.0 FOR FULL C.O.P. DATUM.
 3. REFER TO SHEET C1.4 FOR STORM DRAIN DETAILS

LINE TABLE		
NO.	DIRECTION	LENGTH
L1	S89°47'50"W	15.00'
L2	S00°12'10"E	264.00'

- GRADING & DRAINAGE CONSTRUCTION NOTES**
1. INSTALL HEAVY DUTY ASPHALT PAVEMENT SECTION PER DETAIL 1 ON SHEET C1.1.
 2. INSTALL STANDARD DUTY ASPHALT PAVEMENT SECTION PER DETAIL 1 ON SHEET C1.1.
 3. INSTALL HEAVY DUTY CONCRETE PAVEMENT SECTION PER DETAIL ON 2 SHEET C1.1.
 4. INSTALL CURB TERMINATION PER MAG STD DTL 222.
 5. INSTALL 4" CONCRETE SIDEWALK PER C.O.P. STD DTL 1230. SEE LANDSCAPE PLANS FOR FINISH COLOR AND JOINTING DETAILS AND REQUIREMENTS. WHERE ADJACENT TO CURB SIDEWALK AND CURB MAY BE POURED TOGETHER AS INTEGRAL CURB AND SIDEWALK. IN ABSENCE OF SPECIFIC JOINT SPACING IN LANDSCAPE PLANS, CONTACT ENGINEER.
 6. CONSTRUCT 6" VERTICAL CURB & GUTTER PER MAG STD DTL 220-1, TYPE A.
 7. CONSTRUCT 6" SINGLE CURB PER MAG STD DTL 222, TYPE A.
 8. CONSTRUCT ADA ACCESSIBLE RAMP PER DETAIL 3 ON SHEET C1.1.
 11. ADJUST GATE VALVE, BOX, RING AND COVER TO GRADE PER COP STD DTL 1391-1, TYPE C.
 12. ADJUST SEWER CLEANOUT FRAME & COVER TO GRADE PER MAG STD DTL 441.
 13. CONTRACTOR TO COMPACT ENTIRE AREA OF BUILDING LIMITS PER SOILS REPORT.
 16. NEW LANDSCAPE AREA. SEE LANDSCAPE PLANS FOR DETAILS.
 18. PROPOSED FENCE. SEE LANDSCAPE PLANS FOR DETAILS.
 19. PROPOSED PEDESTRIAN GATE. SEE LANDSCAPE PLANS FOR DETAILS.
 20. PROPOSED VEHICLE GATE. SEE LANDSCAPE PLAN FOR DETAILS.
 26. PROPOSED DECOMPOSED GRANITE. SEE LANDSCAPE PLANS FOR DETAILS.
 31. PROPOSED TRASH ENCLOSURE. SEE ARCHITECTURAL PLANS FOR DETAILS.
 32. PROTECT EXISTING TREE IN PLACE.
 33. PROPOSED SEATING BENCH. SEE ARCHITECTURAL PLANS FOR DETAILS.



TRACKING NUMBERS:
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Q.S.# 30-36

ROADRUNNER SCHOOL - PVUSD
3602 E. CHOLLA ST.
PHOENIX, ARIZONA 85028

GRADING & DRAINAGE PLAN

PROJ. NO.	2242.01
DATE:	OCT 2020
SCALE:	1"=20'
DESIGNED:	DB
DRAWN:	CM
APPROVED:	LH
REV.	



DWG. NO.

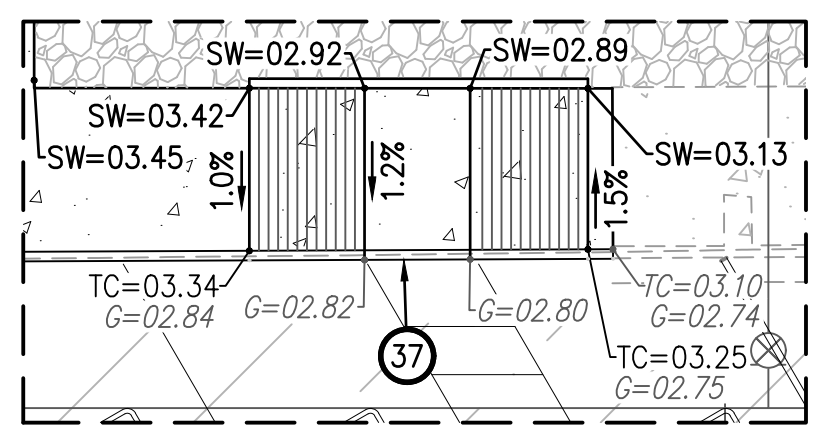
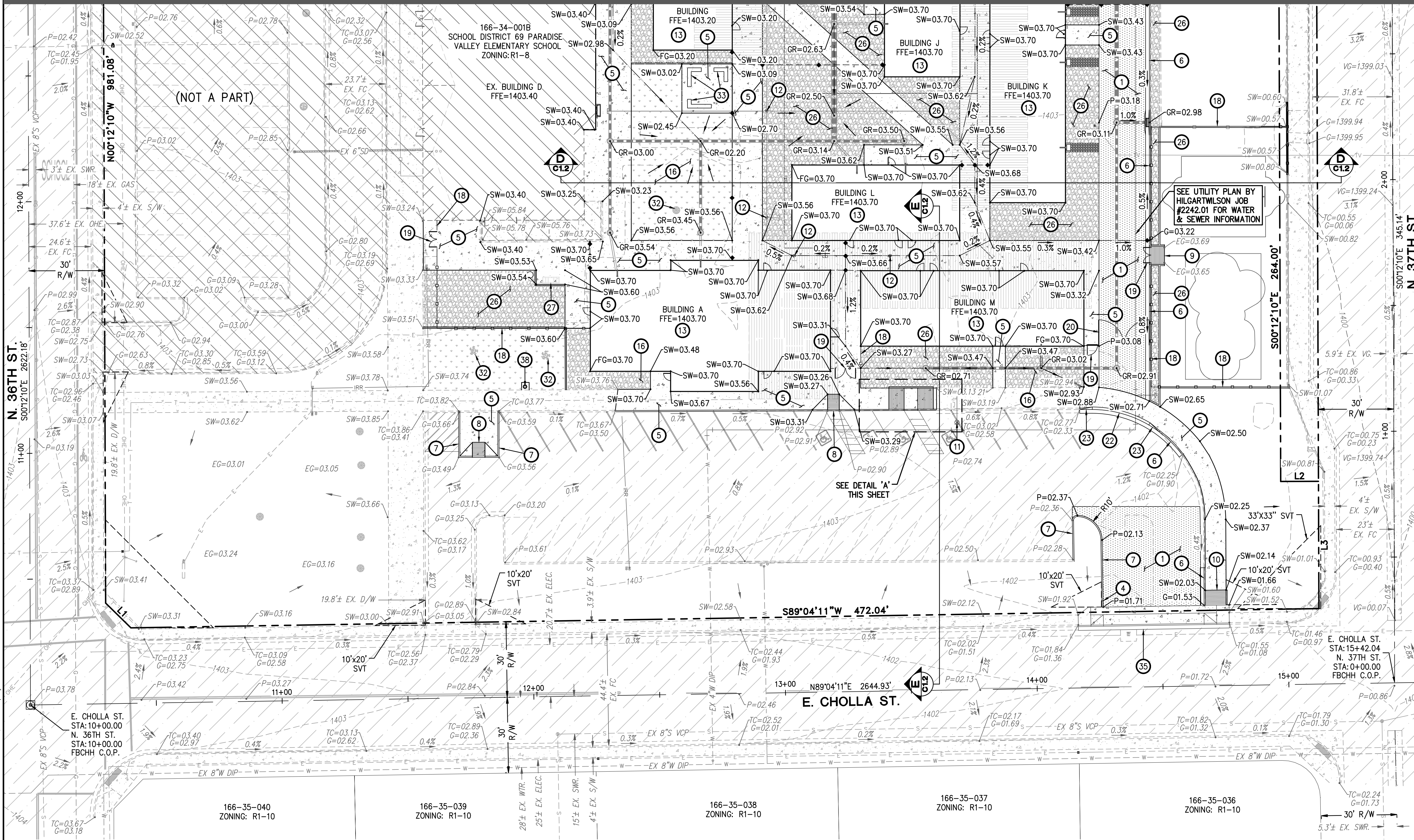
C2.1

SHT. 7 OF 8

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MATCHLINE, SEE SHEET C2.1



DETAIL 'A'
SCALE: 1" = 10'

LINE TABLE		
NO.	DIRECTION	LENGTH
L1	N45°33'59"W	14.05'
L2	N89°47'50"E	15.00'
L3	S00°12'10"E	50.58'

- NOTES:**
- ALL DIMENSIONS ARE TO FACE OF CURB UNLESS NOTED OTHERWISE.
 - ALL RADIUS ARE 3' UNLESS NOTED OTHERWISE.
 - ADD 1,400 TO ALL TRUNCATED ELEVATIONS. REFER TO BENCHMARK ON SHEET C1.0 FOR FULL COP DATUM.
 - REFER TO SHEET C1.4 FOR STORM DRAIN DETAILS

- GRADING & DRAINAGE CONSTRUCTION NOTES**
- INSTALL HEAVY DUTY ASPHALT PAVEMENT SECTION PER DETAIL 1 ON SHEET C1.1.
 - INSTALL CURB TERMINATION PER MAG STD DTL 222.
 - INSTALL 4" CONCRETE SIDEWALK PER C.O.P. STD DTL 1230. SEE LANDSCAPE PLANS FOR FINISH COLOR AND JOINTING DETAILS AND REQUIREMENTS. WHERE ADJACENT TO CURB, SIDEWALK AND CURB MAY BE POURED TOGETHER AS INTEGRAL CURB AND SIDEWALK. IN ABSENCE OF SPECIFIC JOINT SPACING IN LANDSCAPE PLANS, CONTACT ENGINEER.
 - CONSTRUCT 6" VERTICAL CURB & GUTTER PER MAG STD DTL 220-1, TYPE A.
 - CONSTRUCT 6" SINGLE CURB PER MAG STD DTL 222, TYPE A.
 - CONSTRUCT ADA ACCESSIBLE RAMP PER DETAIL 3 ON SHEET C1.1.
 - CONSTRUCT ADA ACCESSIBLE RAMP PER DETAIL 4 ON SHEET C1.1.
 - CONSTRUCT ADA ACCESSIBLE RAMP PER DETAIL ON 5 SHEET C1.1.
 - ADJUST GATE VALVE, BOX, RING AND COVER TO GRADE PER COP STD DTL 1391-1, TYPE C.
 - ADJUST SEWER CLEANOUT FRAME & COVER TO GRADE PER MAG STD DTL 441.
 - CONTRACTOR TO COMPACT ENTIRE AREA OF BUILDING LIMITS PER SOILS REPORT.
 - NEW LANDSCAPE AREA. SEE LANDSCAPE PLANS FOR DETAILS.
 - PROPOSED FENCE. SEE LANDSCAPE PLANS FOR DETAILS.
 - PROPOSED PEDESTRIAN GATE. SEE LANDSCAPE PLANS FOR DETAILS.
 - PROPOSED VEHICLE GATE. SEE LANDSCAPE PLAN FOR DETAILS.
 - INSTALL 6" MOUNTABLE CURB AND GUTTER TYPE 'E' PER MAG STD DTL 220-2.
 - INSTALL CURB TRANSITION TYPE 'E' TO 'A' PER MAG STD DTL 220-2.
 - PROPOSED DECOMPOSED GRANITE. SEE LANDSCAPE PLANS FOR DETAILS.
 - PROPOSED BIKE RAKE. SEE ARCHITECTURAL PLANS FOR DETAILS.
 - PROTECT EXISTING TREE IN PLACE.
 - PROPOSED SEATING BENCH. SEE ARCHITECTURAL PLANS FOR DETAILS.
 - REFER TO PAVING PLAN BY HILGARTWILSON JOB #2242.01 FOR OFFSITE PAVING INFORMATION.
 - CONSTRUCT ADA ACCESSIBLE RAMP PER DETAIL ON 8 SHEET C1.1.
 - PROPOSED FLAG POLE. SEE ARCHITECTURAL PLANS FOR DETAILS.

20 10 0 20 40
SCALE: 1" = 20 FEET

TRACKING NUMBERS:
KIVA#
SDEV#
CPGD#
Q.S.# 30-36

64903
LOGAN T. HOPP
REGISTERED PROFESSIONAL ENGINEER
STATE OF ARIZONA
EXPIRATION DATE 12/31/2024

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
CALL 811 or click Arizona811.COM

ROADRUNNER SCHOOL - PVUSD
3602 E. CHOLLA ST.
PHOENIX, ARIZONA 85028

GRADING & DRAINAGE PLAN

PROJ. NO. 2242.01
DATE: OCT 2020
SCALE: 1"=20'
DESIGNED: DB DRAWN: CM APPROVED: LH
REV. DWG. NO.
C2.2
SHT. 8 OF 8

HILGARTWILSON

1. THESE PLANS ARE SUBJECT TO THE INTERPRETATION OF INTENT BY THE ENGINEER. ALL QUESTIONS REGARDING THESE PLANS SHALL BE PRESENTED TO THE ENGINEER. ANYONE WHO TAKES IT UPON THEMSELF THE INTERPRETATION OF THE DRAWINGS OR MAKES REVISIONS TO THE SAME WITHOUT CONFERRING WITH THE DESIGN ENGINEER SHALL BE RESPONSIBLE FOR THE CONSEQUENCES THEREOF.
2. THE ESTIMATED QUANTITIES SHOWN ARE FOR INFORMATION PURPOSES ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETENESS AND ACCURACY OF A DETAILED ESTIMATE BASED ON THESE PLANS, CURRENT CODES, AND SITE VISITATION.
3. ALL EARTHWORK CONSTRUCTION SHALL CONFORM TO THE LATEST MARICOPA ASSOCIATION OF GOVERNMENTS STANDARD DETAILS AND/OR SPECIFICATIONS INCLUDING ANY SUPPLEMENTS THERETO, AND ALL ADDENDA. THE CONTRACTOR IS TO FOLLOW THE RECOMMENDATIONS OF THE GEOTECHNICAL EVALUATION, AS PREPARED BY RICKER ATKINSON MCBEE NORMAN & ASSOCIATES, INC., PHONE NO. (480) 921-8100, PROJECT NO. 26796, DATED SEP 23, 2020.
4. PRIOR TO BIDDING THE WORK, THE CONTRACTOR SHALL THOROUGHLY SATISFY HIMSELF AS TO THE ACTUAL CONDITIONS, REQUIREMENTS OF THE WORK AND EXCESS OR DEFICIENCY IN QUANTITIES. NO CLAIMS SHALL BE MADE AGAINST THE OWNER/DEVELOPER OR ENGINEER FOR ANY EXCESS OR DEFICIENCY THEREIN, ACTUAL OR RELATIVE.
5. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES OR SAFETY PRECAUTIONS OR PROGRAMS UTILIZED IN CONNECTION WITH THE WORK, AND WILL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
6. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR COORDINATING THE RELOCATION OF UTILITIES, POWER POLES, EXISTING SITE IMPROVEMENTS, ETC.
7. THE CONTRACTOR SHALL MAKE NO CLAIM AGAINST THE OWNER OR THE SURVEYOR REGARDING ALLEGED INACCURACY OF CONSTRUCTION STAKES SET BY THE SURVEYOR UNLESS ALL SURVEY STAKES SET BY THE ENGINEER ARE MAINTAINED INTACT AND CAN BE VERIFIED AS TO THEIR ORIGIN, IF, IN THE OPINION OF THE SURVEYOR, THE STAKES ARE NOT MAINTAINED INTACT AND CANNOT BE VERIFIED AS TO THEIR ORIGIN, ANY REMEDIAL WORK REQUIRED TO CORRECT ANY ITEM OF IMPROPER CONSTRUCTION WORK SHALL BE PERFORMED AT THE SOLE EXPENSE OF THE RESPONSIBLE CONTRACTOR OR SUBCONTRACTOR.
8. THE SURVEYOR WILL MAKE FIELD AS-BUILT MEASUREMENTS OF THE WORK. UPON NOTIFICATION BY THE CLIENT OR HIS REPRESENTATIVE THAT THE WORK IS COMPLETE AND READY FOR AS-BUILT SURVEY, FOR PIPE WORK, THE CONTRACTOR IS RESPONSIBLE FOR LEAVING TRENCHES OPEN SO THAT AS-BUILTS CAN BE PERFORMED TO COMPLY WITH THE AGENCY'S REQUIREMENTS. (IF THE TRENCHES ARE BACKFILLED AND OBSURED TO THE POINT THAT AS-BUILT MEASUREMENTS CANNOT BE PERFORMED, IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO POTHOLE UTILITY TRENCHES AS NECESSARY TO COMPLETE AN AS-BUILT SURVEY.)
9. THE CONTRACTOR IS TO VERIFY THE LOCATION, ELEVATION, CONDITION, AND PAVEMENT CROSS-SLOPE OF ALL EXISTING SURFACES AT POINTS OF TIE-IN AND MATCHING, PRIOR TO COMMENCEMENT OF GRADING, PAVING, CURB AND GUTTER OR OTHER SURFACE CONSTRUCTION. SHOULD EXISTING LOCATIONS, ELEVATIONS, CONDITIONS, OR PAVEMENT CROSS-SLOPES DIFFER FROM THAT SHOWN ON THESE PLANS, RESULTING IN THE DESIRED INTENT REFLECTED ON THESE PLANS NOT BEING ABLE TO BE CONSTRUCTED, THE CONTRACTOR SHALL NOTIFY THE OWNER'S AGENT IMMEDIATELY FOR DIRECTION ON HOW TO PROCEED PRIOR TO COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR ACCEPTS RESPONSIBILITY FOR ALL COSTS ASSOCIATED WITH CORRECTIVE ACTION IF THESE PROCEDURES ARE NOT FOLLOWED.
10. EXISTING UTILITIES SHOWN ON THESE PLANS HAVE BEEN LOCATED ACCORDING TO INFORMATION PROVIDED BY THE AGENCY OPERATING EACH UTILITY. LOCATIONS SHOWN ARE APPROXIMATE ONLY, AND ARE NOT RELIABLE FOR CONSTRUCTION PURPOSES. CALL BLUE STAKE FOR FIELD LOCATION AT (602) 263-1100. THE CONTRACTOR SHALL PROTECT AND MAINTAIN ALL EXISTING UTILITIES ON THE SITE. ANY DAMAGE TO EXISTING UTILITIES, WHETHER OR NOT ON THE DRAWING, SHALL BE REPAIRED/REPLACED AT THE CONTRACTOR'S EXPENSE. EXISTING SURFACE FEATURES AND FENCING SHALL BE REPLACED IN LIKE KIND.
11. PRIOR TO CONSTRUCTION, THE ENGINEER AND APPLICABLE AGENCY MUST APPROVE ANY ALTERATION, OR VARIANCE FROM THESE PLANS. ANY VARIATIONS FROM THESE PLANS SHALL BE PROPOSED ON CONSTRUCTION FIELD PRINTS AND TRANSMITTED TO THE ENGINEER.
12. ANY INSPECTION BY THE CITY, COUNTY, ENGINEER, OR OTHER JURISDICTIONAL AGENCY, SHALL NOT, IN ANY WAY, RELIEVE THE CONTRACTOR FROM ANY OBLIGATION TO PERFORM THE WORK IN STRICT COMPLIANCE WITH APPLICABLE CODES AND AGENCY REQUIREMENTS.
13. CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL STORM DRAIN PIPES, STORM WATER RETENTION PIPES AND DRAINAGE FACILITIES FROM DAMAGE DURING ALL STAGES OF CONSTRUCTION. THE DEPTH OF COVER ON THE STORM DRAIN PIPE IS DESIGNED FOR FINAL GRADE. THEREFORE, EXTRA CARE SUCH AS BERMING OVER PIPES, FLAGGING OR SIGNAGE SHOULD BE USED DURING CONSTRUCTION TO MAINTAIN COVER OR PROTECT THE PIPES.
14. THE ENGINEER MAKES NO REPRESENTATION OR GUARANTEE REGARDING EARTHWORK QUANTITIES OR THAT THE EARTHWORK FOR THIS PROJECT WILL BALANCE DUE TO THE VARYING FIELD CONDITIONS, CHANGING SOIL TYPES, ALLOWABLE CONSTRUCTION TOLERANCES AND CONSTRUCTION METHODS THAT ARE BEYOND THE CONTROL OF THE ENGINEER.
15. IF PAD CERTIFICATIONS ARE PERFORMED, IT IS UNDERSTOOD THAT THE CERTIFICATION PROVIDES ONLY A REPRESENTATIVE ELEVATION OF THE AVERAGE GRADE OF EACH LOT, BUILDINGS OR UNIT PAD, AND SHALL NOT BE CONSTRUED TO INCLUDE YARD AND STREET SUB-GRADE CERTIFICATION OR CERTIFICATION THAT THE ENTIRE PAD IS LEVEL, THAT IT WAS CONSTRUCTED IN THE DESIGNED LOCATION OR WAS GRADED TO THE CROSS-SECTION SET FORTH ON THE PLANS OR AS DESIGNATED IN THE SOILS REPORT.
16. FINISH GRADES SHOWN ON THESE PLANS ARE THE FINAL FINISH GRADES. CONTRACTOR IS RESPONSIBLE FOR OVER-EXCAVATING LANDSCAPE AREAS TO ALLOW FOR PLANTING AND UTILITY TRENCHING SPOILS AND FOR THE FINAL LANDSCAPE TREATMENT (DECOMPOSED GRANITE, LAWN, RIP RAP, ETC.).
17. UNDERGROUND UTILITIES SHALL BE MARKED IN ACCORDANCE WITH SECTION 40-360 OF THE ARIZONA REVISED STATUTES AND LOCAL MUNICIPALITY REQUIREMENTS.

THIS SET OF CONSTRUCTION PLANS HAVE BEEN SUBMITTED TO THE FOLLOWING UTILITY COMPANIES FOR REVIEW AND TO DETERMINE ANY POTENTIAL CONFLICTS.		
UTILITY COMPANY	COMPANY CONTACT	DATE SUBMITTED
SOUTHWEST GAS CORPORATION	CONFLICT REVIEW	10/07/20
COX COMMUNICATIONS	TRAFFIC MGMT. CENTER	10/07/20
ARIZONA PUBLIC SERVICE	CONFLICT REVIEW	10/07/20
CENTURY LINK	CONFLICT REVIEW	10/07/20
SALT RIVER PROJECT	CONFLICT REVIEW	10/07/20

A PORTION OF THE NORTHEAST QUARTER OF SECTION 24, TOWNSHIP 3 NORTH, RANGE 3 EAST
OF THE GILA AND SALT RIVER MERIDIAN, MARICOPA COUNTY, ARIZONA

1. PLANNING AND DEVELOPMENT DEPARTMENT'S CIVIL/SITE INSPECTION STAFF SHALL BE NOTIFIED 48 HOURS BEFORE ANY CONSTRUCTION BEGINS, TELEPHONE (602) 262-7811.
2. ALL SEWER MAIN 18 INCH IN SIZE OR 12 FEET IN DEPTH, OR GREATER, REQUIRES 5' MANHOLES.
3. ALL MANHOLES NEWLY CONSTRUCTED OR EXISTING THAT ARE WORKED IN FOR CONNECTIONS SHALL BE PAINTED WITH INSECTICIDE PAINT PER CITY OF PHOENIX SUPPLEMENT TO M.A.G. SECTION 627.
4. MANHOLES WITH 60" DIAMETER AND PIPES GREATER THAN 12" REQUIRE COATING PER C.O.P. SUPPLEMENT 626. ANY EXISTING MANHOLES WITH CORROSION COATING THAT ARE DISTURBED OR ADJUSTED TO NEW FINISH GRADES SHALL HAVE ANY DAMAGED COATING REPAIRED, INCLUDING ALL ADJUSTING RINGS.
5. THIS SET OF PLANS HAS BEEN INITIALLY REVIEWED BY THE CITY OF PHOENIX. SUCH REVIEW IS PART OF THE PROCESS THAT DEVELOPER(S)/CONTRACTOR(S) MUST GO THROUGH IN ORDER TO OBTAIN A CONSTRUCTION PERMIT. THE RESULTS OF SUCH INITIAL REVIEW, HOWEVER, SHALL NOT DICTATE THE CITY OF PHOENIX'S FINAL DETERMINATION AS TO THE ACCEPTABILITY OF THE PLANS, NOR SHALL IT PREVENT THE CITY OF PHOENIX FROM REQUIRING THAT ERRORS AND OMISSIONS, AS FOUND ON PLANS, BE ADDRESSED BY DEVELOPER(S)/CONTRACTOR(S), WHERE SUCH ERRORS AND OMISSIONS CAUSE THE PLANS TO BE IN VIOLATION OF OR INADEQUATE UNDER APPLICABLE FEDERAL/STATE/COUNTY/LOCAL CODES, ORDINANCES, REGULATIONS, OR OTHER LAWS. THIS REVIEWED AND STAMPED SET OF PLANS MUST BE KEPT AT THE CONSTRUCTION SITE AT ALL TIMES.
6. ALL CONSTRUCTION IN CITY OF PHOENIX RIGHT-OF-WAY, OR EASEMENT, TO CONFORM TO M.A.G. SPECIFICATIONS AND DETAILS AND CITY OF PHOENIX SUPPLEMENT TO M.A.G. SPECIFICATIONS AND DETAILS, UNLESS MODIFIED ON THE PLANS.
7. ALL SEWER MAINS MUST HAVE A T.V. INSPECTION BEFORE ACCEPTED AS COMPLETE (SEE CITY OF PHOENIX SUPPLEMENT TO M.A.G. SPECIFICATION SECTION 615.11(C)).
8. TRAFFIC REGULATIONS: ALL WORK MUST COMPLY WITH REQUIREMENTS OF THE CURRENT CITY OF PHOENIX "TRAFFIC BARRICADE MANUAL."
9. THE FOLLOWING M.A.G. DETAILS ARE SPECIFICALLY NOT APPROVED: 425 24" ALUMINUM FRAME AND COVER.
10. NEW MANHOLES ARE TO BE BUILT WITHOUT STEPS.
11. CONSTRUCTION SHALL COMPLY WITH M.A.G. SEC. 601 & CITY OF PHOENIX SUPPLEMENTS.
12. NEW SEWER LINES ARE TO BE BUILT IN STANDARD UTILITY LOCATIONS.
13. A SIX (6) FOOT MINIMUM HORIZONTAL SEPARATION FROM ANY UNDERGROUND UTILITY SHALL BE PROVIDED FOR SEWER MAINS, SEWER SERVICES, WATER MAINS, AND WATER SERVICES. THE MINIMUM HORIZONTAL SEPARATION IS MEASURED FROM OUTSIDE OF SEWER MAIN, SEWER SERVICE, WATER MAIN, OR WATER SERVICE TO OUTSIDE OF UNDERGROUND UTILITY.
14. A ONE (1) FOOT MINIMUM VERTICAL SEPARATION FROM ANY DRY UNDERGROUND UTILITY CROSSING SHALL BE PROVIDED FOR SEWER MAINS, SEWER SERVICES, WATER MAINS, AND WATER SERVICES. THE MINIMUM VERTICAL SEPARATION IS MEASURED FROM OUTSIDE OF SEWER MAIN, SEWER SERVICE, WATER MAIN, OR WATER SERVICE TO OUTSIDE OF DRY UNDERGROUND UTILITY.
15. A TWO (2) FOOT MINIMUM VERTICAL SEPARATION SHALL BE PROVIDED BETWEEN ANY SEWER MAIN OR STORM DRAIN MAIN CROSSING UNDER A WATER MAIN. THE MINIMUM VERTICAL SEPARATION IS MEASURED FROM OUTSIDE OF WATER MAIN TO OUTSIDE OF SEWER MAIN OR STORM DRAIN MAIN. SEE M.A.G. STANDARD DETAIL 404 FOR ADDITIONAL INFORMATION AND/OR PROVISIONS FOR CLEARANCE.
16. EXCEPTIONS OR DEVIATIONS FROM THE ABOVE MINIMUM CLEARANCES MUST BE APPROVED AND SHOWN ON THE APPROVED WATER AND SEWER PLANS. WHEN UTILITY CONFLICTS ARE FOUND DURING CONSTRUCTION, ALL CHANGES AND REVISIONS MUST BE PRECEDED BY AN APPROVED PLAN REVISION.
17. ANY AND ALL MORE STRINGENT SEPARATION REQUIREMENTS REQUIRED BY FEDERAL, STATE, COUNTY, OR LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.
18. ANY SEWER LINES THAT ARE INSTALLED WITH LESS THAN .004 FT/FT SLOPE MUST BE INSTALLED USING A LASER.
19. WHEN DIP SEWER PIPE IS USED, LINING IS REQUIRED PER CITY OF PHOENIX SUPPLEMENT TO M.A.G. SEC. 750.1.
20. CONCRETE OR ASPHALT DAMAGED DURING THE COURSE OF CONSTRUCTION SHALL BE REMOVED AND REPLACED IN KIND PRIOR TO FINAL INSPECTION.
21. RECORD DRAWING SUBMITTALS MUST COMPLY WITH WATER SERVICES DEPARTMENT ENGINEERING POLICY P-69. A COPY OF THE POLICY CAN BE OBTAINED IN THE DEPARTMENT'S WEBSITE:
[HTTP://PHOENIX.GOV/WATERSERVICES/DESIGN/ENGPOLICIES/INDEX.HTML](http://phoenix.gov/waterservices/design/engpolicies/index.html)
22. "PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED FOR THE CONSTRUCTION OF THE PUBLIC WORKS FACILITIES SHOWN HEREON. THE PROJECT OWNER, AND THE OWNER'S LENDERS, CONSULTANTS, CONTRACTORS AND SUBCONTRACTORS ARE PROHIBITED FROM DISCLOSING THE PLANS AND SPECIFICATIONS TO ANY PERSONS OTHER THAN THOSE WHO HAVE A NEED TO KNOW THE INFORMATION FOR THE PURPOSE OF THE PROJECT." (THIS NOTE IS REQUIRED ON ALL SHEETS).
23. A PAVEMENT CUT SURCHARGE SHALL BE ASSESSED ON THIS PROJECT FOR ANY TRENCHING OR POTHOLING IN NEW ASPHALT PAVEMENT THAT IS LESS THAN 30 MONTHS OLD. SURCHARGE FEES ASSESSED ARE IN ADDITION TO THE REGULAR PERMIT FEES AND ARE OVER AND ABOVE ANY SPECIAL BACKFILL, COMPACTION, AND PAVEMENT REPLACEMENT STIPULATIONS THAT MAY BE IMPOSED AS A CONDITION OF PERMITTING. PAVEMENT CUT SURCHARGE FEES IS ASSESSED IN ACCORDANCE WITH SECTION 31-38 OF THE PHOENIX CITY CODE.
24. PLAN APPROVAL IS VALID FOR 180 DAYS. PRIOR TO PLAN APPROVAL EXPIRATION, ALL ASSOCIATED PERMITS SHALL BE PURCHASED OR THE PLANS SHALL BE RESUBMITTED FOR EXTENSION OF PLAN APPROVAL. THE EXPIRATION, EXTENSION, AND REINSTATEMENT OF CIVIL ENGINEERING PLANS AND PERMITS SHALL FOLLOW THE SAME GUIDELINES AS THOSE INDICATED IN THE PHOENIX BUILDING CONSTRUCTION CODE ADMINISTRATIVE PROVISIONS SECTION 105.3 FOR BUILDING PERMITS.

1. PLANNING AND DEVELOPMENT DEPARTMENT'S CIVIL/SITE INSPECTION STAFF SHALL BE NOTIFIED 48 HOURS BEFORE ANY CONSTRUCTION BEGINS TELEPHONE 602-262-7811.
2. ALL WATER VALVE BOXES SHALL BE PER CITY OF PHOENIX DETAIL P1391, TYPE A ONLY.
3. ALL CONSTRUCTION IN CITY OF PHOENIX RIGHT-OF-WAY, OR EASEMENT, IS TO CONFORM TO M.A.G. SPECIFICATIONS AND DETAILS AND CITY OF PHOENIX SUPPLEMENT TO M.A.G. SPECIFICATIONS AND DETAILS, UNLESS MODIFIED ON THE PLANS.
4. ALL DUCTILE IRON PIPE WATER MAIN VALVES, FITTINGS, AND BENDS SHALL BE RESTRAINED. RESTRAINED JOINT REQUIREMENTS AND APPROVED RESTRAINING SYSTEM ARE SHOWN IN CITY OF PHOENIX SUPPLEMENT TO M.A.G. SPECIFICATIONS, SECTION 750.3. THE LENGTH OF THE RESTRAINTS MUST BE PER M.A.G. STANDARD DETAIL 303-1 AND 303-2. THRUST BLOCKS ARE NOT ALLOWED TO BE USED IN LIEU OF APPROVED RESTRAINED JOINT SYSTEMS. THRUST BLOCKS CAN BE USED IN ADDITION TO THE APPROVED RESTRAINED JOINT SYSTEMS WHERE A SPECIFIC CITY OF PHOENIX SUPPLEMENT TO M.A.G. STANDARD DETAIL CALLS OUT FOR THRUST BLOCKING, SUCH AS CURRENT DETAILS, P1343, P1351, AND 1360 OR WHEN OTHERWISE APPROVED BY THE WATER SERVICES DEPARTMENT.
5. THE FOLLOWING M.A.G. DETAILS ARE SPECIFICALLY NOT APPROVED:
 - 302-1 JOINT RESTRAINT WITH TIE RODS
 - 302-2 JOINT RESTRAINT WITH TIE RODS - ANCHOR BLOCKS
 - 321 STANDARD WATER METER VAULT
 - 345-1 3", 4", AND 6" WATER METER
 - 345-2 4" AND 6" WATER METER WITH ON-SITE FIRE HYDRANTS
 - 370 VERTICAL REALIGNMENT OF WATER MAINS
 - 381 ANCHOR BLOCKS FOR VERTICAL BENDS
 - 390 CURB STOP WITH FLUSHING PIPE
 - 391-1 VALVE BOX INSTALLATION
6. COMPACTION SHALL COMPLY WITH M.A.G. SECTION 601 & CITY OF PHOENIX SUPPLEMENTS.
7. NEW WATER LINES ARE TO BE BUILT IN ACCORDANCE WITH THE CITY OF PHOENIX "STANDARD UTILITY LOCATIONS".
8. THIS SET OF PLANS HAS BEEN INITIALLY REVIEWED BY THE CITY OF PHOENIX. SUCH REVIEW IS PART OF THE PROCESS THAT DEVELOPER(S)/CONTRACTOR(S) MUST GO THROUGH IN ORDER TO OBTAIN A CONSTRUCTION PERMIT. THE RESULTS OF SUCH INITIAL REVIEW SHALL NOT DICTATE THE CITY OF PHOENIX'S FINAL DETERMINATION AS TO THE ACCEPTABILITY OF THE PLANS. NOR SHALL IT PREVENT THE CITY OF PHOENIX FROM REQUIRING ERRORS AND OMISSIONS, AS FOUND ON PLANS, BE ADDRESSED BY DEVELOPER(S) /CONTRACTOR(S), WHERE SUCH ERRORS AND OMISSIONS CAUSE THE PLANS TO BE IN VIOLATION OF OR INADEQUATE UNDER APPLICABLE FEDERAL/STATE/COUNTY/LOCAL CODES, ORDINANCES, REGULATIONS, OR OTHER LAWS. THIS REVIEWED AND STAMPED SET OF PLANS MUST BE KEPT AT THE CONSTRUCTION SITE AT ALL TIMES.
9. PIPE DEFLECTION SHALL BE PER MANUFACTURERS' RECOMMENDATIONS.
10. ALL WORK MUST COMPLY WITH REQUIREMENTS OF THE CURRENT CITY OF PHOENIX "TRAFFIC BARRICADE MANUAL".
11. THE CONTRACTOR IS TO NOTIFY THE PUBLIC THAT WILL BE AFFECTED BY ANY SHUTDOWNS A MINIMUM OF 48 HOURS IN ADVANCE.
12. A SIX (6) FOOT MINIMUM HORIZONTAL SEPARATION FROM ANY UNDERGROUND UTILITY SHALL BE PROVIDED FOR SEWER MAINS, SEWER SERVICES, WATER MAINS, AND WATER SERVICES. THE MINIMUM HORIZONTAL SEPARATION IS MEASURED FROM OUTSIDE OF SEWER MAIN, SEWER SERVICE, WATER MAIN, OR WATER SERVICE TO OUTSIDE OF UNDERGROUND UTILITY.
13. A ONE (1) FOOT MINIMUM VERTICAL SEPARATION FROM ANY DRY UNDERGROUND UTILITY CROSSING SHALL BE PROVIDED FOR SEWER MAINS, SEWER SERVICES, WATER MAINS, AND WATER SERVICES. THE MINIMUM VERTICAL SEPARATION IS MEASURED FROM OUTSIDE OF SEWER MAIN, SEWER SERVICE, WATER MAIN, OR WATER SERVICE TO OUTSIDE OF DRY UNDERGROUND UTILITY.
14. A TWO (2) FOOT MINIMUM VERTICAL SEPARATION SHALL BE PROVIDED BETWEEN ANY SEWER MAIN AND STORM DRAIN CROSSING A WATER MAIN. THE MINIMUM VERTICAL SEPARATION IS MEASURED FROM OUTSIDE OF WATER MAIN TO OUTSIDE OF SEWER MAIN OR STORM DRAIN MAIN. SEE M.A.G. STANDARD DETAIL 404 FOR ADDITIONAL INFORMATION AND/OR PROVISIONS FOR CLEARANCE.
15. EXCEPTIONS OR DEVIATIONS FROM THE ABOVE MINIMUM CLEARANCES MUST BE APPROVED AND SHOWN ON THE APPROVED WATER AND SEWER PLANS. WHEN UTILITY CONFLICTS ARE FOUND DURING CONSTRUCTION, ALL CHANGES AND REVISIONS MUST BE PRECEDED BY AN APPROVED PLAN REVISION.
16. ANY AND ALL MORE STRINGENT REQUIREMENTS REQUIRED BY FEDERAL, STATE, COUNTY, OR LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.
17. WATER SERVICES SHALL BE INSTALLED PERPENDICULAR TO THE WATER MAIN. WATER SERVICES AT THE END OF CUL-DESACS MAY VARY AS NECESSARY, BUT WILL BE APPROVED ON A CASE BY CASE BASIS.
18. ALL SERVICES SHALL RUN IN A STRAIGHT LINE FROM THE WATER MAIN TO THE METER BOX.
19. NEITHER WATER SERVICE METER BOX NOR ANY PORTION OF A WATER SERVICE SHALL BE INSTALLED UNDER AN EXISTING OR PROPOSED DRIVEWAY OR SIDEWALK RAMP.
20. CONCRETE OR ASPHALT DAMAGED DURING THE COURSE OF CONSTRUCTION SHALL BE REMOVED AND REPLACED IN KIND PRIOR TO FINAL INSPECTION.
21. RECORD DRAWING SUBMITTALS MUST COMPLY PER THE WATER SERVICES DEPARTMENT ENGINEERING POLICY P-68. A COPY OF THE POLICY CAN BE OBTAINED IN THE DEPARTMENT'S WEBSITE: [HTTP://PHOENIX.GOV/WATERSERVICES/DESIGN/ENPOLICIES/INDEX.HTML](http://phoenix.gov/waterservices/design/enpolicies/index.html)
22. IN ACCORDANCE WITH AAC R18-4-213, ALL MATERIALS ADDED AFTER JANUARY 1, 1993 WHICH MAY COME INTO CONTACT WITH DRINKING WATER SHALL CONFORM TO NATIONAL SANITATION FOUNDATION STANDARDS 60 AND 61.
23. PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED FOR THE CONSTRUCTION OF THE PUBLIC WORKS FACILITIES SHOWN HEREON. THE PROJECT OWNER, AND THE OWNER'S LENDERS, CONSULTANTS, CONTRACTORS AND SUBCONTRACTORS ARE PROHIBITED FROM DISCLOSING THE PLANS AND SPECIFICATIONS TO ANY PERSONS OTHER THAN THOSE WHO HAVE A NEED TO KNOW THE INFORMATION FOR THE PURPOSE OF THE PROJECT." (NOTE IS REQUIRED ON ALL SHEETS INCLUDING COVER SHEET)
24. A PAVEMENT CUT SURCHARGE SHALL BE ASSESSED ON THIS PROJECT FOR ANY TRENCHING OR POTHOLING IN NEW ASPHALT PAVEMENT THAT IS LESS THAN 30 MONTHS OLD. SURCHARGE FEES ASSESSED ARE IN ADDITION TO THE REGULAR PERMIT FEES AND ARE OVER AND ABOVE ANY SPECIAL BACKFILL, COMPACTION, AND PAVEMENT REPLACEMENT STIPULATIONS THAT MAY BE IMPOSED AS A CONDITION OF PERMITTING. PAVEMENT CUT SURCHARGE FEES ARE ASSESSED IN ACCORDANCE WITH SECTION 31-38 OF THE PHOENIX CITY CODE.
25. PLAN APPROVAL IS VALID FOR 180 DAYS. PRIOR TO PLAN APPROVAL EXPIRATION, ALL ASSOCIATED PERMITS SHALL BE PURCHASED OR THE PLANS SHALL BE RESUBMITTED FOR EXTENSION OF PLAN APPROVAL. THE EXPIRATION, EXTENSION, AND REINSTATEMENT OF CIVIL ENGINEERING PLANS AND PERMITS SHALL FOLLOW THE SAME GUIDELINES AS THOSE INDICATED IN THE PHOENIX BUILDING CONSTRUCTION CODE ADMINISTRATIVE PROVISIONS SECTION 105.3 FOR BUILDING PERMITS.

LOT AREA GROSS: 518,834 S.F. 11.91 ACRES
LOT AREA NET: 473,586 S.F. 10.87 ACRES

C3.0	UTILITY PLAN – COVER SHEET
C3.1	UTILITY PLAN

PARADISE VALLEY SCHOOL DISTRICT
20621 N. 32ND ST.
PHOENIX, ARIZONA 85050
PH: (602) 449-2260
CONTACT: LES THOMPSON

SPS+ ARCHITECTS, LLP
8681 E. VIA DE NEGOCIO
SCOTTSDALE, AZ 85258
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FAX: (480) 991-2623
CONTACT: DARLENE CADMAN

HILGARTWILSON
1830 N. 95TH AVE. SUITE 110
PHOENIX, ARIZONA 85016
PHONE: (623) 248-3456
FAX: (602) 368-2436
CONTACT: LOGAN HOPP

BENCHMARK IS A FOUND 3" CITY OF PHOENIX BRASS CAP IN
HAND HOLE, DOWN 12", LOCATED AT THE SOUTHWEST CORNER
OF SECTION 24, TOWNSHIP 3 NORTH, RANGE 3 EAST OF THE
GILGA AND SALT RIVER MERIDIAN, MARICOPA COUNTY, ARIZONA.
CITY OF PHOENIX BENCHMARK
ELEVATION: 1402.723'
DATUM: NGVD29

BASIS OF BEARING IS S89°04'11"W ALONG THE SOUTH LINE OF THE NORTHEAST QUARTER OF SECTION 24, TOWNSHIP 3 NORTH, RANGE 3 EAST OF THE GILA AND SALT RIVER MERIDIAN, MARICOPA COUNTY, ARIZONA.

LOCATED IN A PORTION OF THE NORTHEAST QUARTER OF SECTION 24, TOWNSHIP 3 NORTH, RANGE 3 EAST
OF THE GILA AND SALT RIVER MERIDIAN, MARICOPA COUNTY, ARIZONA

CONSIST NEW DOMESTIC WATER LINE & BUILDING CONNECTIONS, IN ADDITION TO NEW SEWER CONNECTION WITH 6" LINE, CLEANOUTS, AND BUILDING CONNECTION.

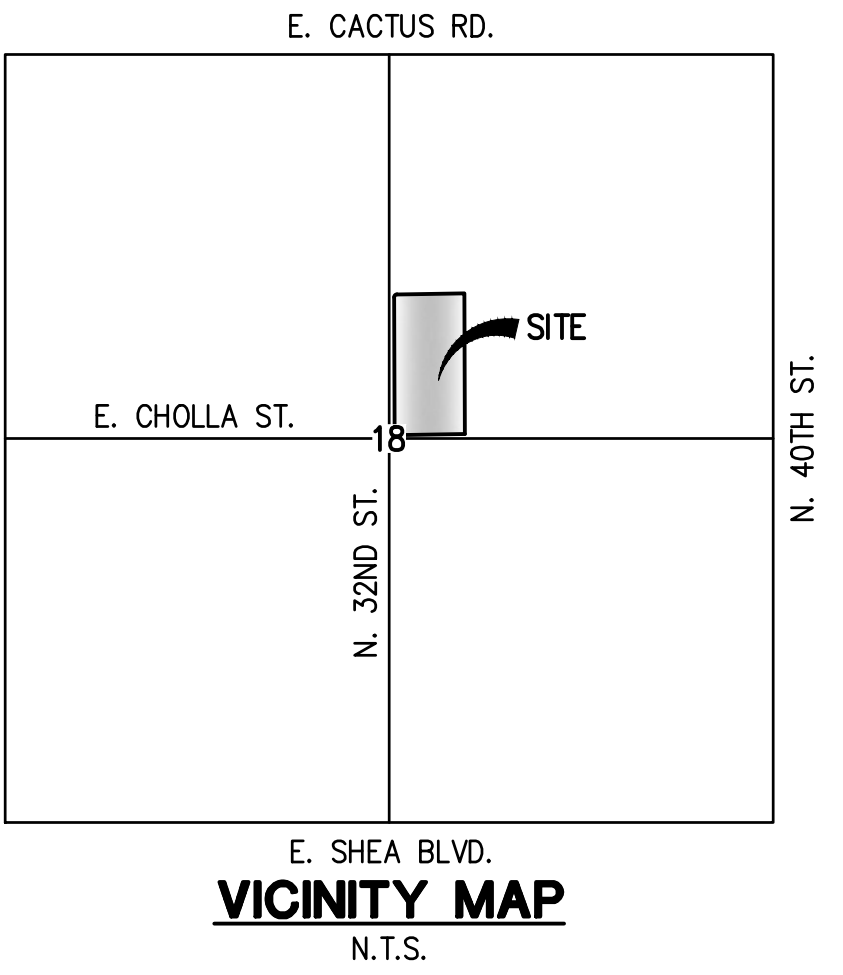
I HEREBY CERTIFY THAT THE "RECORD DRAWING" MEASUREMENTS AS SHOWN HEREON WERE MADE UNDER MY SUPERVISION OR AS NOTED AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

THESE PLANS HAVE BEEN APPROVED BY THE
DEVELOPMENT SERVICES DEPARTMENT FOR THE
ISSUANCE OF THE FOLLOWING PERMIT(S):

WATER _____ PH _____ DATE _____

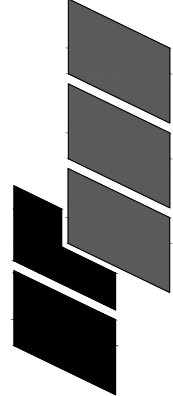
SEWER _____ PH _____ DATE _____

TRACKING NUMBERS:
KIVA#
SDEV#
CCPR#
LPRM#
Q.S.# 30-36



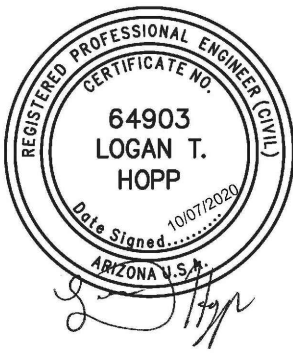
3602 E. CHOLLA ST.
PHOENIX, ARIZONA 85028

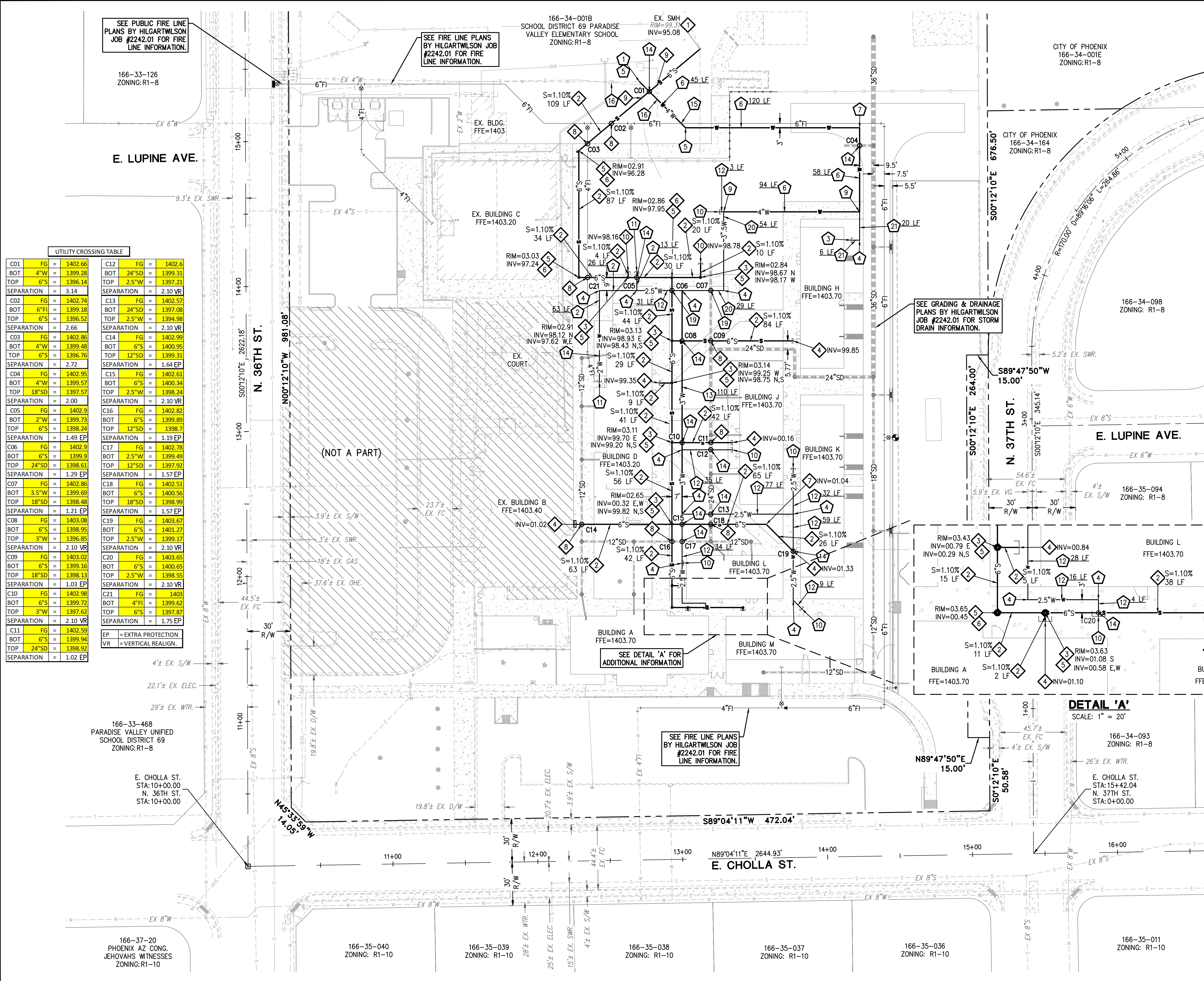
UTILITY PLAN - COVER SHEET



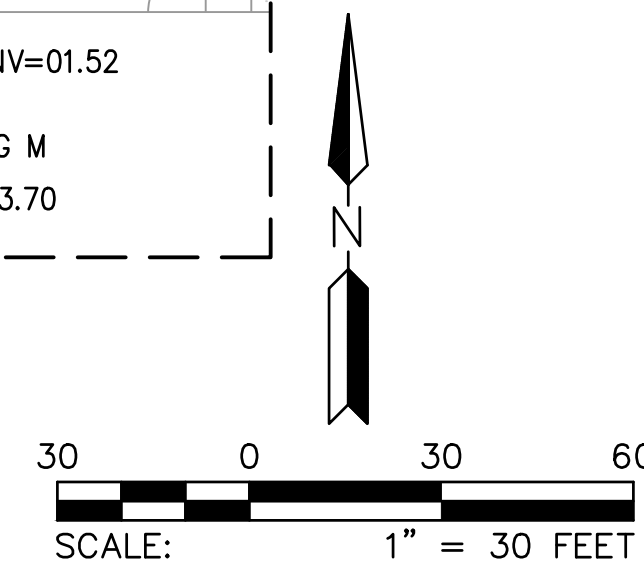
HILGARTWILSON

www.hilgartwilson.com



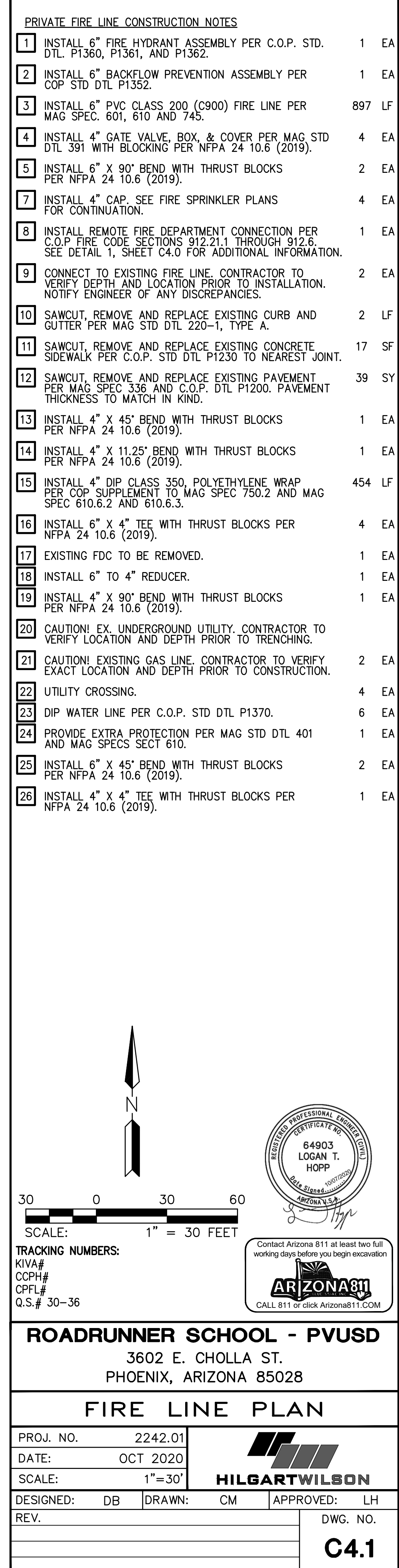


- WATER CONSTRUCTION NOTES**
- CUT INTO AND CONNECT TO EXISTING DOMESTIC WATERLINE. CONTRACTOR TO VERIFY LOCATION, SIZE, AND DEPTH PRIOR TO INSTALLATION. NOTIFY ENGINEER OR ANY DISCREPANCIES.
 - INSTALL 2" PVC SCH 80 WATER LINE PER 2018 IPC.
 - INSTALL 1.5" CAP PER 2018 IPC. SEE PLUMBING PLANS FOR CONTINUATION.
 - INSTALL FITTING PER 2018 IPC.
 - INSTALL 45° BEND WITH JOINT RESTRAINTS PER 2018 IPC.
 - INSTALL 4" PVC SCH 80 WATER LINE PER 2018 IPC.
 - INSTALL 90° BEND WITH JOINT RESTRAINTS PER 2018 IPC.
 - INSTALL 4" X 4" PVC TEE WITH JOINT RESTRAINTS PER 2018 IPC.
 - INSTALL 2.5" CAP PER 2018 IPC. SEE PLUMBING PLANS FOR CONTINUATION.
 - INSTALL 2" CAP PER 2018 IPC. SEE PLUMBING PLANS FOR CONTINUATION.
 - INSTALL 2.5" PVC SCH 80 WATER LINE PER 2018 IPC.
 - INSTALL 3" PVC SCH 80 WATER LINE PER 2018 IPC.
 - UTILITY CROSSING.
 - VERTICALLY REALIGN DOMESTIC WATER LINE AS NEEDED TO AVOID CONFLICT WITH FIRE LINE PER 2018 IPC GUIDELINES. TYPICAL ALL CROSSINGS.
 - CAUTION! EX. UNDERGROUND UTILITY. CONTRACTOR TO VERIFY LOCATION AND DEPTH PRIOR TO TRENCHING.
 - VERTICALLY REALIGN DOMESTIC WATER LINE AS NEEDED TO AVOID CONFLICT WITH SEWER LINE PER 2018 IPC GUIDELINES. TYPICAL ALL CROSSINGS.
 - INSTALL 3.5" PVC SCH 80 WATER LINE PER 2018 IPC.
 - INSTALL 1.5" PVC SCH 80 WATER LINE PER 2018 IPC.
- SEWER CONSTRUCTION NOTES**
- CONNECT TO EXISTING PRIVATE SEWER MANHOLE.
 - INSTALL 6" PVC (SDR 35) SEWER PIPE PER 2018 IPC. (LENGTH AND SLOPE AS SHOWN).
 - INSTALL 6" X 6" BUILDING CONNECTION PER COP STD DTL P1440.
 - INSTALL SEWER PLUG PER MAG STD DTL 427. SEE PLUMBING PLANS FOR CONTINUATION.
 - INSTALL CLEANOUT PER 2018 IPC.
 - INSTALL SEWER WYE PER 2018 IPC.
 - INSTALL 45° BEND PER 2018 IPC.
 - UTILITY CROSSING.
 - CAUTION! EX. UNDERGROUND UTILITY. CONTRACTOR TO VERIFY LOCATION AND DEPTH PRIOR TO TRENCHING.
 - INSTALL SEWER PLUG PER MAG STD DTL 427.



TRACKING NUMBERS:
KIVA#
SDEV#
CCPR#
LPRM#
Q.S.# 30-36

ROADRUNNER SCHOOL - PVUSD			
3602 E. CHOLLA ST. PHOENIX, ARIZONA 85028			
UTILITY PLAN			
PROJ. NO.	2242.01		
DATE:	OCT 2020		
SCALE:	1"=30'		
DESIGNED:	DB	DRAWN:	CM
REV.		APPROVED:	LH
			DWG. NO.
			C3.1
			SHT. 2 OF 2



STORM WATER MANAGEMENT PLAN
GENERAL NOTES (CITY OF PHOENIX)

1. A COPY OF THE APPROVED GRADING AND DRAINAGE PLAN FOR THIS PROJECT, TOGETHER WITH A COPY OF THE NOTICE OF INTENT (N.O.I.) AND THIS STORM WATER MANAGEMENT PLAN (SWMP), SHALL BE MAINTAINED ON THE SITE AND AVAILABLE FOR REVIEW. THOSE ELEMENTS OF THE GRADING AND DRAINAGE PLAN PERTINENT TO OR REFERENCED ON THE SWMP SHALL BE CONSIDERED A PART OF THE SWMP.
2. PLANNING AND DEVELOPMENT DEPARTMENT'S CIVIL/SITE INSPECTION GROUP SHALL BE NOTIFIED 48 HOURS BEFORE ANY ON-SITE AND/OR OFF-SITE CONSTRUCTION BEGINS, AT (602) 262-7811.
3. THE OPERATOR SHALL OBTAIN A DUST CONTROL PERMIT FROM MARICOPA COUNTY HEALTH DEPARTMENT AND PERFORM MEASURES AS REQUIRED BY THE PERMIT TO PREVENT EXCESS DUST.
4. THE OPERATOR SHALL PERFORM, AT A MINIMUM, A VISUAL INSPECTION OF THE CONSTRUCTION SITE ONCE EVERY MONTH AND WITHIN 24 HOURS OF RAINFALL GREATER THAN OR EQUAL TO A HALF OF AN INCH OR MORE. THE OPERATOR SHALL PREPARE A REPORT DOCUMENTING HIS/HER FINDINGS ON THE CONDITIONS OF THE SWMP CONTROLS AND NOTE ANY EROSION PROBLEM AREAS. THE OPERATOR'S REPORT IS TO BE SUBMITTED TO THE PLANNING AND DEVELOPMENT DEPARTMENT CIVIL/SITE INSPECTOR FOR REVIEW AND APPROVAL. FACILITIES SHALL BE MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING. IN ADDITION, ALL TEMPORARY SILTATION CONTROLS SHALL BE MAINTAINED IN A SATISFACTORY CONDITION UNTIL SUCH TIME THAT CLEARING AND/OR CONSTRUCTION IS COMPLETED, PERMANENT DRAINAGE FACILITIES ARE OPERATIONAL, AND THE POTENTIAL FOR EROSION HAS PASSED.
5. THE OPERATOR SHALL AMEND THIS PLAN AS NECESSARY DURING THE COURSE OF CONSTRUCTION TO RESOLVE ANY PROBLEM AREAS, WHICH BECOME EVIDENT DURING THE CONSTRUCTION AND/OR DURING RAINFALLS.
6. THE PERMITTEE SHALL FILE A NOTICE OF TERMINATION (N.O.T.) AFTER COMPLETION OF CONSTRUCTION AND PLACEMENT OF FINAL LANDSCAPE MATERIALS. THE N.O.T. IS TO BE SUBMITTED TO THE PLANNING AND DEVELOPMENT DEPARTMENT CIVIL/SITE INSPECTOR TO FINAL THE SWMP PERMIT.
7. THE PERMITTEE SHALL SAVE ALL RECORDS, INCLUDING THE N.O.I., SWMP, N.O.T., AND INSPECTION REPORTS, ON FILE FOR A MINIMUM OF THREE YEARS FROM THE DATE OF FILING THE N.O.T.
8. THE IMPLEMENTATION OF THESE PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE FACILITIES IS THE RESPONSIBILITY OF THE PERMITTEE/CONTRACTOR UNTIL ALL CONSTRUCTION IS APPROVED AND THE N.O.T. IS SUBMITTED TO THE PLANNING AND DEVELOPMENT DEPARTMENT CIVIL/SITE INSPECTOR.
9. THE FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES IN SUCH A MANNER AS TO INSURE THAT SEDIMENT-LADEN WATER DOES NOT ENTER THE DRAINAGE SYSTEM OR VIOLATE APPLICABLE WATER STANDARDS, AND MUST BE INSTALLED AND IN OPERATION PRIOR TO ANY GRADING OR LAND CLEARING. WHEREVER POSSIBLE, MAINTAIN NATURAL VEGETATION FOR SILT CONTROL.
10. PLAN APPROVAL IS VALID FOR 180 DAYS. PRIOR TO PLAN APPROVAL EXPIRATION, ALL ASSOCIATED PERMITS SHALL BE PURCHASED OR THE PLANS SHALL BE RESUBMITTED FOR EXTENSION OF PLAN APPROVAL. THE EXPIRATION, EXTENSION, AND REINSTATEMENT OF CIVIL ENGINEERING PLANS AND PERMITS SHALL FOLLOW THE SAME GUIDELINES AS THOSE INDICATED IN THE PHOENIX BUILDING CONSTRUCTION CODE ADMINISTRATIVE PROVISIONS SECTION 105.3 FOR BUILDING PERMITS.

Drainage Design Manual for Maricopa County

Erosion Control: Best Management Practices

EC-7 EC-7: Dust Control

DEFINITION

A comprehensive plan to limit offsite sediment depression by minimizing or controlling airborne fugitive dust.

GENERAL INFORMATION

Applicability - Effectiveness
Perimeter and Access Controls - high

Most effective when used with:

[EC-5 Stabilized Construction Entrance](#)

[EC-6 Construction Road Stabilization](#)

[GH-6 Road Sweeping/Trackout Cleaning](#)

Alternative BMPs:

For long term dust control, consider [SPC-6 Revegetation](#)

RATINGS

Associated Costs	H	M	L
Implementation			X
Maintenance	X		
Training			X
Target Pollutants Removal	H	M	L
Oil and Grease			X
Nutrients			X
Sediment	X		
Floatable Material			X
Metals		X	
Other Construction Waste			X

FIGURES

Photos/Sketches

[EC-7 Dust Control Photos](#)

Tables

[Commonly Used Dust Suppressants](#)

RECOMMENDED STANDARDS AND SPECIFICATIONS

THERE ARE MANY PRODUCTS AVAILABLE AS DUST SUPPRESSANTS FOR CHEMICALS AVAILABLE AND RECOMMENDATIONS FOR THEIR USE ARE SUMMARIZED IN COMMONLY USED DUST SUPPRESSANTS TABLE.

RECOMMENDED MAINTENANCE AND INSPECTION

DUST CONTROL IS AN ONGOING PROCESS DURING SITE CONSTRUCTION. RE-APPLICATION OF DUST CONTROL MEASURE MAY BE NECESSARY UNTIL CONSTRUCTION IS COMPLETE.

POST CONSTRUCTION METHODS

CONSIDER REVEGETATION OR EMULSION CHIP SEALS FOR MORE PERMANENT DUST CONTROL AFTER THE CONSTRUCTION PROJECT HAS BEEN COMPLETED.

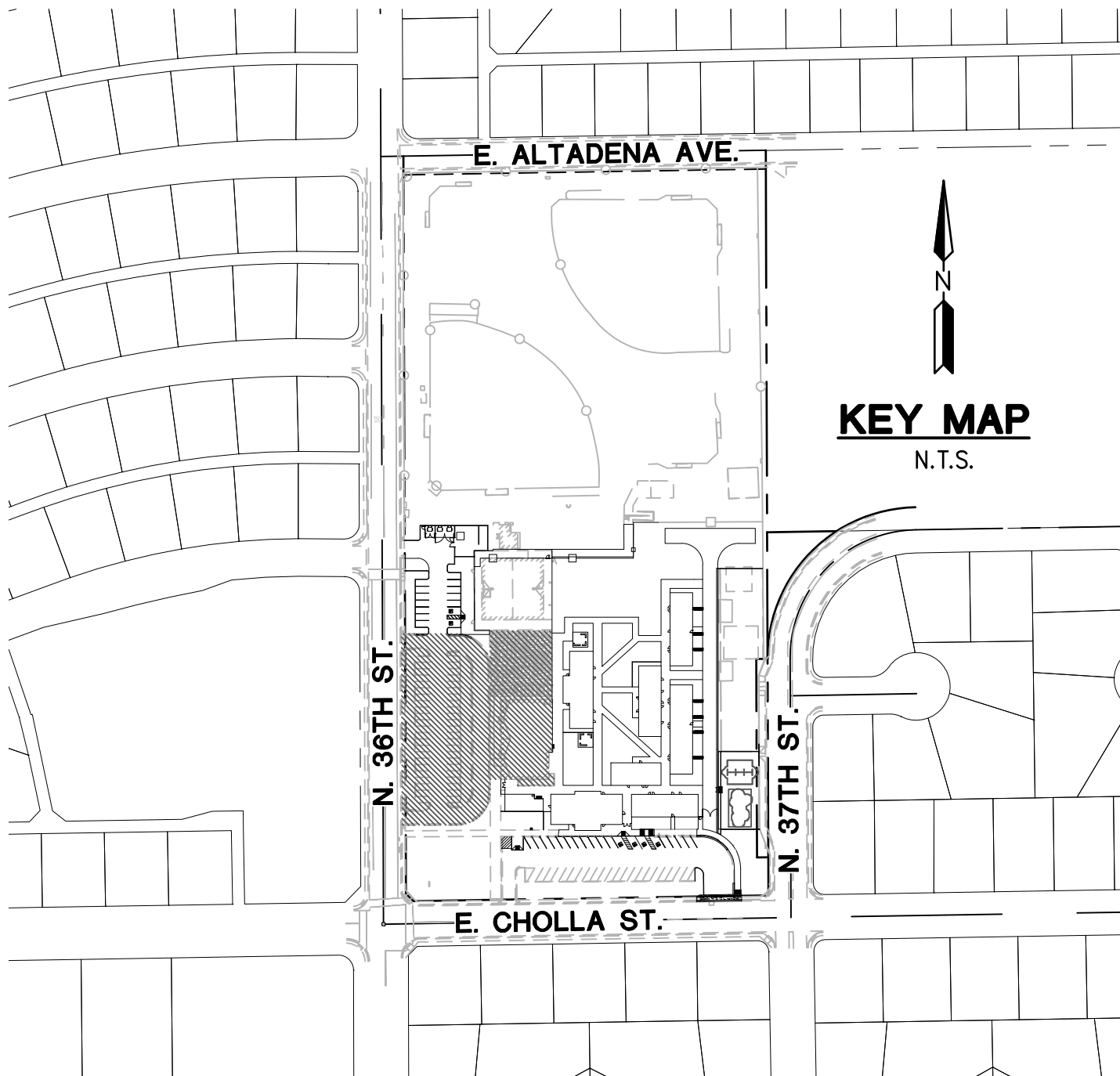
STORM WATER MANAGEMENT PLAN
ROADRUNNER SCHOOL - PVUSD

PHOENIX, ARIZONA 85028

A PORTION OF THE NORTHEAST QUARTER OF SECTION 24, TOWNSHIP 3 NORTH, RANGE 3 EAST OF THE GILA AND SALT RIVER MERIDIAN, MARICOPA COUNTY, ARIZONA

LEGEND

---	CENTER LINE
---	PROPERTY LINE
--- ---	SILT FENCE (SPC-5)
--- ---	GRADE BREAK
--- ---	EXISTING CONTOUR
--- ---	PROPOSED CONTOUR
--- ---	EX. DRAINAGE PATTERN
--- ---	DRAINAGE PATTERN
---	INLET PROTECTION (SPC-7)
---	(SCE) STABILIZED CONSTRUCTION ENTRANCE
WA	WASH OUT AREA (GH-4)
#	CONSTRUCTION NOTE CALLOUT
---	LIMITS OF DISTURBANCE
---	(E.S.O.) EXTREME STORM OUTFALL
HWE	HIGH WATER ELEVATION



SITE AREA

LOT AREA GROSS: 518,834 S.F. 11.91 ACRES
LOT AREA NET: 473,586 S.F. 10.87 ACRES

DISTURBED AREA

154,354 3.54 ACRES

SHEET INDEX

C5.0	STORM WATER MANAGEMENT PLAN - COVER SHEET
C5.1	STORM WATER MANAGEMENT PLAN
C5.2	STORM WATER MANAGEMENT PLAN DETAILS

OWNER

PARADISE VALLEY SCHOOL DISTRICT
20621 N. 32ND ST.
PHOENIX, ARIZONA 85050
PH: (602) 449-2260
CONTACT: LES THOMPSON

ARCHITECT

SPS+ ARCHITECTS, LLP
8681 E. VIA DE NEGOCIO
SCOTTSDALE, AZ 85258
PH: (480) 991-0800
FAX: (480) 991-2623
CONTACT: DARLENE CADMAN

ENGINEER

HILGARTWILSON
1830 N. 95TH AVE. SUITE 110
PHOENIX, ARIZONA 85016
PHONE: (623) 248-3456
FAX: (602) 368-2436
CONTACT: LOGAN HOPP

BENCHMARK

BENCHMARK IS A FOUND 3" CITY OF PHOENIX BRASS CAP IN HAND HOLE, DOWN 12", LOCATED AT THE SOUTHWEST CORNER OF SECTION 24, TOWNSHIP 3 NORTH, RANGE 3 EAST OF THE GILA AND SALT RIVER MERIDIAN, MARICOPA COUNTY, ARIZONA. CITY OF PHOENIX BENCHMARK
ELEVATION: 1402.723'
DATUM: NGVD29

LEGAL DESCRIPTION

LOCATED IN A PORTION OF THE NORTHEAST QUARTER OF SECTION 24, TOWNSHIP 3 NORTH, RANGE 3 EAST OF THE GILA AND SALT RIVER MERIDIAN, MARICOPA COUNTY, ARIZONA

PROJECT DESCRIPTION

REMOVAL OF EXISTING BUILDING AND CONSTRUCTION OF 7 NEW BUILDINGS. NEW STORM DRAIN TO BE INSTALLED WITH NEW BUILDINGS.

FLOOD ZONE DESIGNATION

FEDERAL EMERGENCY AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) COVERAGE FOR THE PROJECT ON FIRM PANEL 04013C1755L (FEMA, OCTOBER 16, 2013). ACCORDING TO THIS FIRM THE PROJECT RESIDES ENTIRELY WITHIN A FLOOD HAZARD ZONE X. FEMA DEFINES THIS FLOOD HAZARD ZONE AS FOLLOWS:
AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD.

AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE "RECORD DRAWING" MEASUREMENTS AS SHOWN HEREON WERE MADE UNDER MY SUPERVISION OR AS NOTED AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED ENGINEER/LAND SURVEYOR

DATE

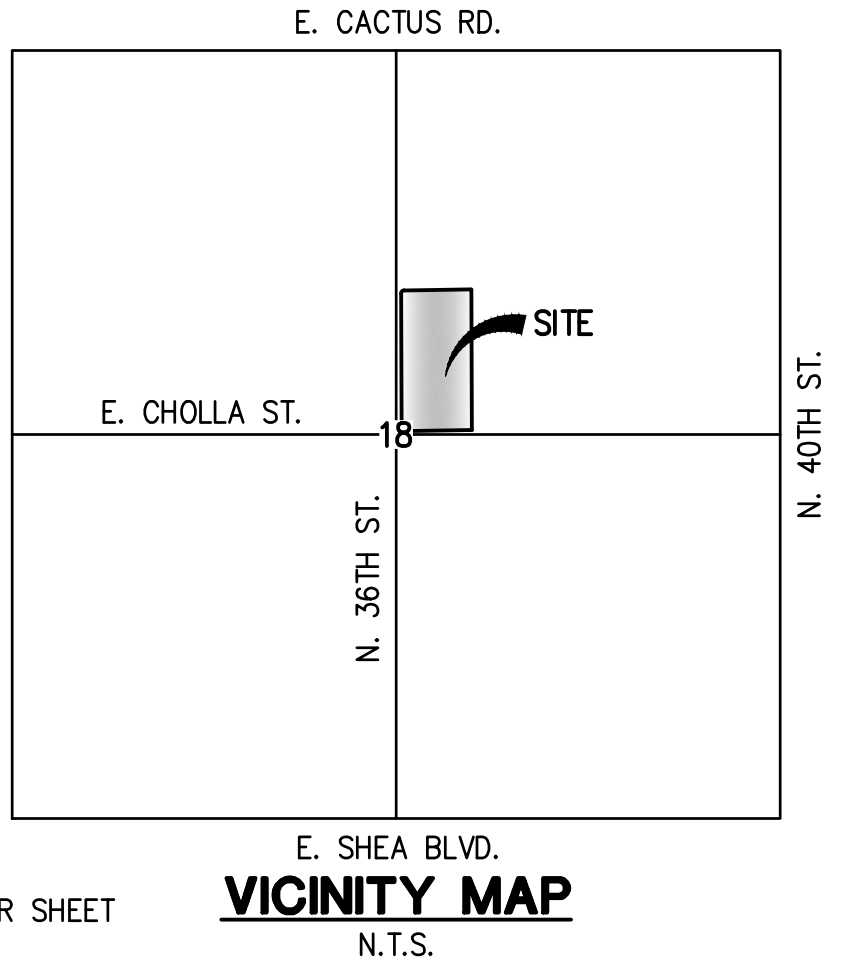
REGISTRATION NUMBER

CITY OF PHOENIX

THESE PLANS HAVE BEEN APPROVED BY THE PLANNING AND DEVELOPMENT DEPARTMENT FOR THE ISSUANCE OF THE FOLLOWING PERMIT(S):

SWMP _____ PH _____ DATE _____

TRACKING NUMBERS:
KIVA# XX-XXXX
SDEV# XXXXXXXX
CPGD# XXXXXXXX
Q.S.# 30-36



ROADRUNNER SCHOOL - PVUSD

3602 E. CHOLLA ST.
PHOENIX, ARIZONA 85028

STORM WATER MANAGEMENT PLAN - COVER SHEET

HILGARTWILSON

PROJ NO.: 2242.01

DATE: OCT 2020

SCALE: N.T.S.

DRAWN: CM

DESIGNED: DB

APPROVED: LH

DWG. NO.

C5.0

SHT. 1 OF 3

GH-4

GH-4: Designated Washdown Areas

DEFINITION

Procedures and practices that are designed to minimize or eliminate the discharge of concrete waste materials to the storm drain systems of watercourses.

GENERAL INFORMATION	RATINGS			
Applicability - Effectiveness Inlet Drain Protection - high Debris Management, Cleanup, and Washout - high	Associated Costs	H	M	L
	Implementation		X	
	Maintenance		X	
Most effective when used with: GH-1: Chemical Management GH-3: Equipment Maintenance Procedures GH-5: Spill Containment Plan	Training		X	
	Target Pollutants Removal	H	M	L
	Oil and Grease		X	
Alternative BMPs: None	Nutrients			X
	Sediment			X
	Floatable Material			X
	Metals		X	
	Other Construction Waste	X		

RECOMMENDED STANDARDS AND SPECIFICATIONS

PCC AND AC WASTES

- PCC AND AC WASTE SHOULD NOT BE ALLOWED TO ENTER STORM DRAINS OR WATERCOURSES. INSTEAD, PCC AND AC WASTE SHOULD BE COLLECTED AND PROPERLY DISPOSED OF OUTSIDE THE HIGHWAY RIGHT-OF-WAY OR PLACED IN A TEMPORARY CONCRETE WASHOUT STRUCTURE.
- INSTALL A SIGN ADJACENT TO EACH TEMPORARY CONCRETE WASHOUT STRUCTURE TO INFORM CONCRETE EQUIPMENT OPERATORS TO UTILIZE THE INSTALLED STRUCTURES.
- A FOREMAN AND/OR CONSTRUCTION SUPERVISOR SHOULD MONITOR ONSITE CONCRETE WORKING TASKS, SUCH AS SAW CUTTING, CORING, GRINDING AND GROOVING TO ENSURE PROPER METHODS ARE IMPLEMENTED.
- SAW CUTTING RESIDUE SHOULD NOT BE ALLOWED TO FLOW ACROSS THE PAVEMENT, AND SHOULD NOT BE LEFT ON THE SURFACE OF THE PAVEMENT. VACUUM SLURRY RESIDUE AND DISPOSE IN A TEMPORARY FACILITY AND ALLOW SLURRY TO DRY. DISPOSE OF DRY SLURRY RESIDUE IN ACCORDANCE WITH GH-2: SOLID WASTE MANAGEMENT.
- SIMILARLY, RESIDUE FROM GRINDING OPERATIONS SHOULD BE PICKED UP BY MEANS OF A VACUUM ATTACHMENT TO THE GRINDING MACHINE.

ONSITE TEMPORARY CONCRETE WASHOUT FACILITY PROCEDURES

- TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE LOCATED A MINIMUM OF 50 FEET FROM STORM DRAIN INLETS, OPEN DRAINAGE FACILITIES, AND WATERCOURSES, UNLESS DETERMINED INFEASIBLE BY THE SITE SUPERVISOR. EACH FACILITY SHOULD BE LOCATED AWAY FROM CONSTRUCTION TRAFFIC OR ACCESS AREAS TO PREVENT DISTURBANCE OR TRACKING.
- TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE CONSTRUCTED ABOVE GRADE OR BELOW GRADE AT THE OPTION OF THE CONTRACTOR AND HAVE SUFFICIENT QUANTITY AND SIZE TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS.
- PERFORM WASHOUT OF CONCRETE MIXER TRUCKS IN DESIGNATED AREAS ONLY. A SIGN SHOULD BE INSTALLED ADJACENT TO EACH WASHOUT FACILITY TO INFORM CONCRETE EQUIPMENT OPERATORS TO UTILIZE THE PROPER FACILITIES.
- WASH CONCRETE ONLY FROM MIXER TRUCK CHUTES INTO APPROVED CONCRETE WASHOUT FACILITY. WASHOUT MAY BE COLLECTED IN AN IMPERMEABLE BAG FOR DISPOSAL.

ABOVE GRADE TEMPORARY CONCRETE WASHOUT STRUCTURE

- ABOVE GRADE TEMPORARY CONCRETE WASHOUT STRUCTURES SHOULD HAVE A MINIMUM LENGTH AND WIDTH OF 10 FEET OR LARGER TO PROVIDE SUFFICIENT VOLUME TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS. IF DEEMED NECESSARY, THE LENGTH AND WIDTH OF THE WASHOUT STRUCTURE MAY BE EXPANDED FOR MORE CAPACITY.
- STRAW BALES, WOOD STAKES, AND SANDBAG MATERIALS SHOULD CONFORM TO THE SPECIFICATIONS IN SPC-1: ORGANIC FILTER BARRIER AND SPC-2: SAND BAG BARRIER.
- PLASTIC LINING MATERIAL SHOULD BE A MINIMUM OF 10-MIL POLYETHYLENE SHEETING AND SHOULD BE FREE OF HOLES, TEARS OR OTHER DEFECTS THAT COMPROMISE THE IMPERMEABILITY OF THE MATERIAL.

BELOW GRADE TEMPORARY CONCRETE WASHOUT STRUCTURE

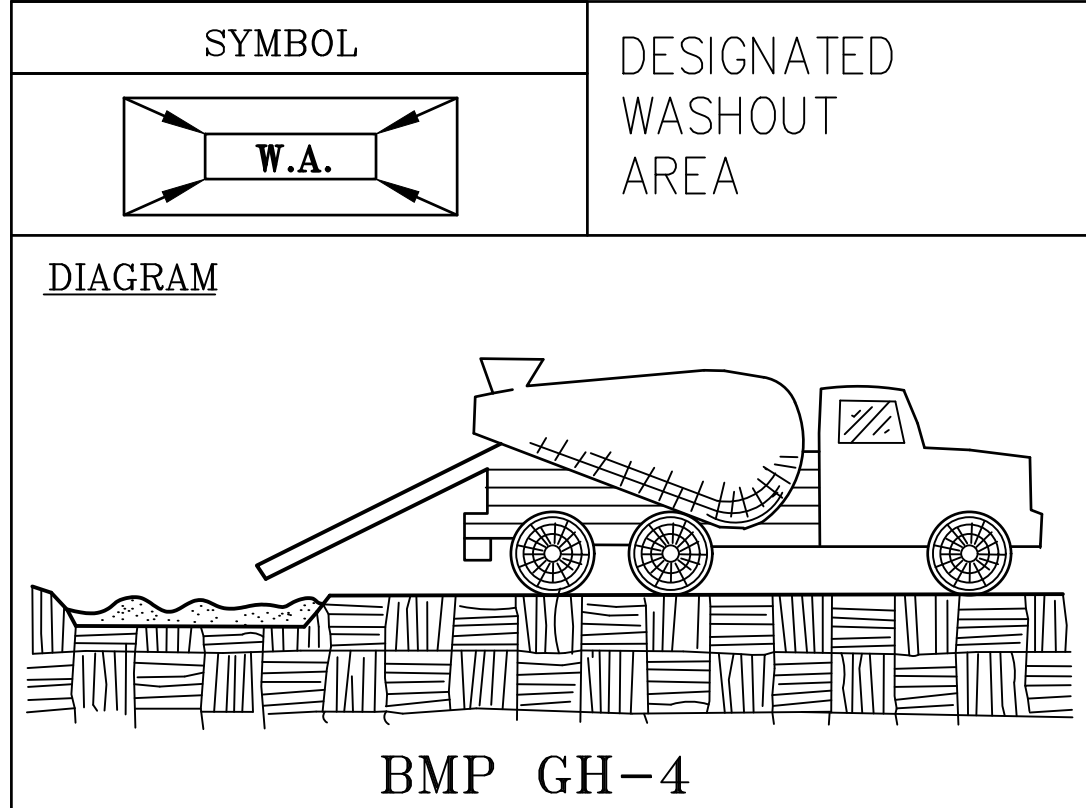
- BELOW GRADE TEMPORARY CONCRETE WASHOUT SHOULD HAVE A MINIMUM LENGTH AND WIDTH OF 10 FEET OR LARGER TO PROVIDE SUFFICIENT VOLUME TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS. IF DEEMED NECESSARY, THE LENGTH AND WIDTH OF THE WASHOUT STRUCTURE MAY BE EXPANDED FOR MORE CAPACITY.
- PLASTIC LINING MATERIAL SHOULD BE A MINIMUM OF 10-MIL POLYETHYLENE SHEETING AND SHOULD BE FREE OF HOLES, TEARS OR OTHER DEFECTS THAT COMPROMISE THE IMPERMEABILITY OF THE MATERIAL.
- ENSURE THAT THE SOIL BASE IS FREE OF ROCKS OR OTHER DEBRIS THAT MAY CAUSE TEARS OR HOLES IN THE PLASTIC LINING MATERIAL.

REMOVAL OF TEMPORARY CONCRETE WASHOUT FACILITIES

- WHEN TEMPORARY CONCRETE WASHOUT FACILITIES ARE NO LONGER REQUIRED FOR THE WORK, AS DETERMINED BY THE SITE SUPERVISOR, HARDENED CONCRETE SHOULD BE BROKEN UP, REMOVED, AND DISPOSED OF IN ACCORDANCE WITH GH-2: SOLID WASTE MANAGEMENT.
- HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCE CAUSED BY THE REMOVAL OF THE TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE BACKFILLED.

RECOMMENDED MAINTENANCE AND INSPECTION

- MONITOR ON SITE CONCRETE WASTE STORAGE AND DISPOSAL PROCEDURES AT LEAST WEEKLY.
- MONITOR CONCRETE WORKING TASKS, SUCH AS SAW CUTTING, CORING, GRINDING AND GROOVING TO ENSURE PROPER METHODS ARE EMPLOYED.



DESIGNATED WASHOUT AREA
BMP GH-4

SPC-7

SPC-7: Storm Drain Inlet Protection

DEFINITION

A variety of methods of intercepting sediment at low point inlets through the use of stone, filter fabric, inlet inserts, and other materials. This is normally located at the inlet, providing either detention or filtration to reduce sediment and floatable materials in stormwater.

GENERAL INFORMATION	RATINGS			
Applicability - Effectiveness Inlet Drain Protection - high Channels and Medians - high Perimeter and Access Controls - high	Associated Costs	H	M	L
	Implementation	X		
	Maintenance	X		
Most effective when used with: An Erosion Control (EC) BMP	Training			X
	Target Pollutants Removal	H	M	L
	Oil and Grease			X
Alternative BMPs: SPC-1 Organic Filter Barrier SPC-2 Sand Bag Barrier SPC-3 Gravel Filter Berms SPC-5 Silt Fence	Nutrients			X
	Sediment		X	
	Floatable Material		X	
	Metals			X
	Other Construction Waste			X

RECOMMENDED STANDARDS AND SPECIFICATIONS

INSTALL INLET PROTECTION IN ACCORDANCE WITH THE FOLLOWING:

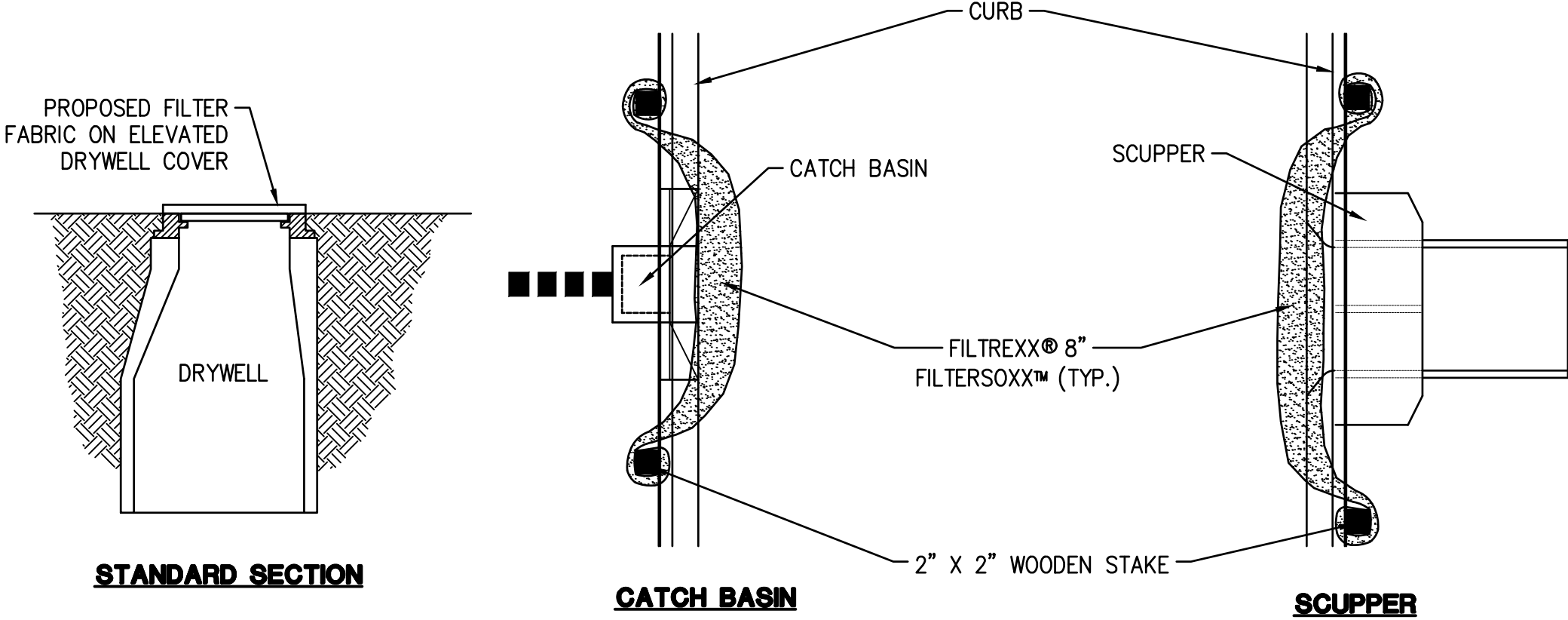
- FILTER FABRIC FENCE: PLACE 2 INCH BY 2 INCH WOODEN STAKES AROUND THE PERIMETER OF THE INLET A MAXIMUM OF 3 FEET APART AND DRIVE THEM AT LEAST 8 INCHES INTO THE GROUND. EXCAVATE A TRENCH APPROXIMATELY 8 INCHES WIDE AND 12 INCHES DEEP AROUND THE OUTSIDE PERIMETER OF THE STAKES. STAPLE THE FILTER FABRIC (FOR MATERIAL SPECIFICATIONS, SEE SPC-5: SILT FENCE TO WOODEN STAKES SO THAT 32 INCHES OF THE FABRIC EXTENDS OUT AND CAN BE FORMED INTO THE TRENCH. USE HEAVY-DUTY WIRE STAPLES AT LEAST 1/2 INCH IN LENGTH. BACKFILL THE ENTIRE TRENCH WITH 3/4 INCH OR LESS WASHED GRAVEL.
- EXCAVATED DROP INLET SEDIMENT TRAP: CONSTRUCT THE INLET TRAP AS SHOWN IN THE STORM DRAIN DROP INLET PROTECTION DRAWING. ENSURE THAT THE EXCAVATION VOLUME CAN CONTAIN APPROXIMATELY 1800 TO 3600 CUBIC FEET PER ACRE OF DISTURBED AREA.
- GRAVEL BAG FILTER: IF THERE IS A HIGH CONTENT OF CLAYS AND SILTS, USE FILTER FABRIC IN CONJUNCTION WITH GRAVEL FOR ADDITIONAL FILTERING CAPACITY. CONSTRUCT THE GRAVEL BAG FILTER AS SPECIFIED BY GRAVEL FILTER BERMS.
- FOAM OR FIBER ROLL BARRIER: FOAM OR FIBER ROLL IS PLACED AROUND THE INLET AND MUST BE ANCHORED TO THE CURB SURFACE, SO THAT IT IS NOT CARRIED AWAY BY RUNOFF FLOWS.

RECOMMENDED MAINTENANCE AND INSPECTION

FOR SYSTEMS USING FILTER FABRIC, INSPECTIONS SHOULD BE MADE ON A REGULAR BASIS, ESPECIALLY AFTER LARGE STORM EVENTS. IF THE FABRIC BECOMES CLOGGED, IT SHOULD BE REPLACED. SEDIMENT SHOULD BE REMOVED WHEN IT REACHES APPROXIMATELY HALF THE HEIGHT OF THE FENCE. IF AN EXCAVATED INLET SEDIMENT TRAP IS USED, SEDIMENT SHOULD BE REMOVED WHEN IT FILLS APPROXIMATELY HALF THE DEPTH OF THE HOLE.

POST CONSTRUCTION METHODS

FOLLOWING THE COMPLETION OF CONSTRUCTION PROJECTS IN RESIDENTIAL AND MUNICIPAL AREAS, MORE PERMANENT DROP-INLET PROTECTION DEVICES CAN BE INSTALLED IN STORM DRAIN INLETS. THE LINK UNDER THE VENDOR PRODUCTS SECTION LISTS SEVERAL DIFFERENT DROP-INLET PROTECTION DEVICES.



FILTREXX FILTER
SPC-7

EC-5

EC-5: Stabilized Construction Entrance

DEFINITION

A stabilized pad of aggregate underlain with filter cloth located at any point where traffic will be entering or exiting a construction site to or from a public right-of-way, street, alley, sidewalk or parking area. For added effectiveness, a wheel wash or wash rack area can be incorporated into the design to further reduce sediment tracking.

GENERAL INFORMATION	RATINGS			
Applicability - Effectiveness Perimeter and Access Controls - high	Associated Costs	H	M	L
	Implementation		X	
	Maintenance		X	
Most effective when used with: EC-6 Construction Road Stabilization EC-7 Dust Control GH-6 Road Sweeping/Trackout Cleaning	Training			X
	Target Pollutants Removal	H	M	L
	Oil and Grease			X
Alternative BMPs: GH-4 Designated Washdown Areas – wheel wash is especially useful with clay soils.	Nutrients			X
	Sediment		X	
	Floatable Material			X
	Metals		X	
	Other Construction Waste			X

RECOMMENDED STANDARDS AND SPECIFICATIONS

STABILIZED CONSTRUCTION ENTRANCES ALONE ARE NOT VERY EFFECTIVE IN REMOVING SEDIMENT FROM EQUIPMENT LEAVING A CONSTRUCTION SITE. EFFICIENCY IS GREATLY INCREASED, THOUGH, WHEN A WASHING RACK IS INCLUDED AT THE POINT OF EGRESS.

DESIGN AND SIZING CONSIDERATIONS

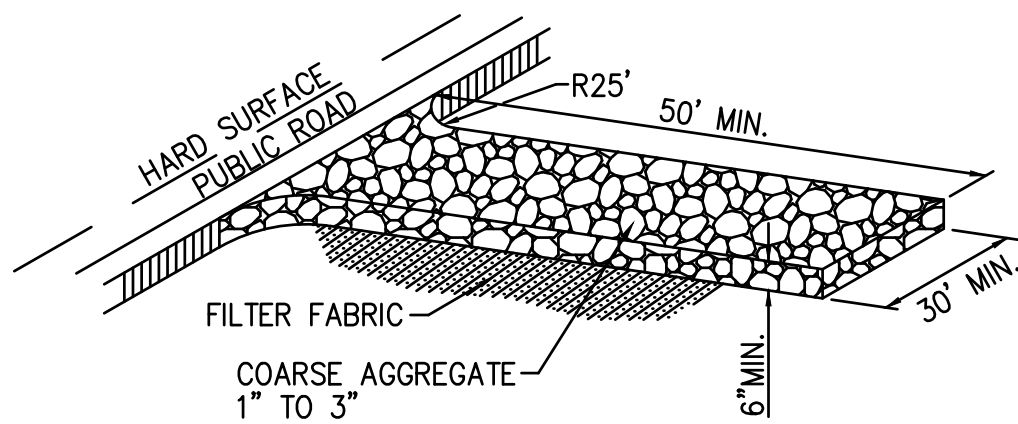
THE AGGREGATE FOR STABILIZED CONSTRUCTION ENTRANCE APRONS SHOULD HAVE A NOMINAL DIAMETER OF 1/10 3 INCHES IN SIZE, WASHED, WELL-GRADED GRAVEL OR CRUSHED ROCK. THE APRON DIMENSIONS RECOMMENDED ARE 30 FEET BY 50 FEET AND 6 INCHES DEEP.

- THE ENTRANCE MUST BE PROPERLY GRADED TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.
- INSTALL A WASHRACK AT GROUND ELEVATION.
- WHEN WASH AREAS ARE PROVIDED, WASHING SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO A PROPERLY CONSTRUCTED SEDIMENT TRAP OR BASIN (POND).

RECOMMENDED MAINTENANCE AND INSPECTION

- INSPECT MONTHLY AND AFTER EACH RAINFALL.
- REPLACE GRAVEL MAT WHEN SURFACE Voids ARE NO LONGER VISIBLE. PERIODIC TOP DRESSING WITH ADDITIONAL STONE WILL BE REQUIRED.
- ALL SEDIMENTS DEPOSITED ON PAVED ROADWAYS MUST BE REMOVED WITHIN 24 HOURS.
- REMOVE GRAVEL AND FILTER FABRIC UPON COMPLETION OF CONSTRUCTION.

NOTE: IF WORKING ON A PROJECT THAT IS SUBJECT TO A MARICOPA COUNTY DUST CONTROL PERMIT UNDER RULE 310, FOLLOW THE PERMIT REQUIREMENTS FOR STABILIZED CONSTRUCTION ENTRANCE DESIGN AND SIZING.



STABILIZED CONSTRUCTION
ENTRANCE
BMP EC-5

TRACKING NUMBERS:

KIVA# XX-XXXX
SDEV# XXXXXXXX
CPGD# XXXXXXXX
Q.S.# 30-36

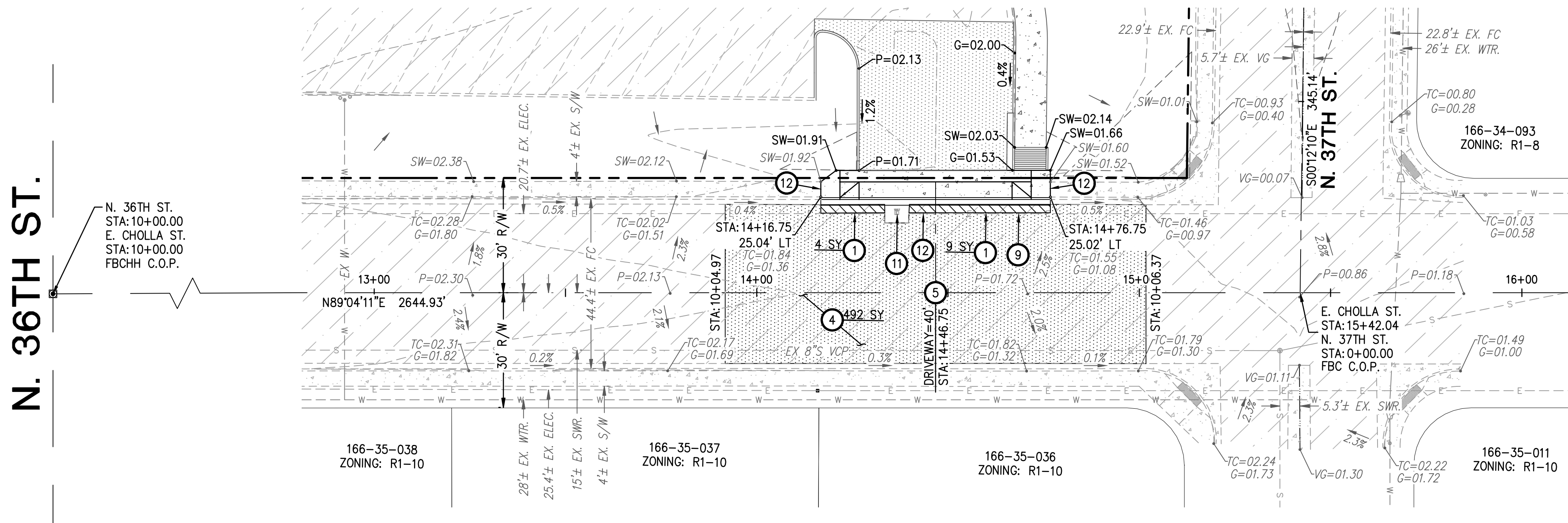


ROADRUNNER SCHOOL - PVUSD

3602 E. CHOLLA ST.
PHOENIX, ARIZONA 85028

STORM WATER MANAGEMENT PLAN DETAILS

PROJ. NO.	2242.01	
DATE:	OCT 2020	
SCALE:	N.T.S.	
DESIGNED: DB	DRAWN: CM	
REV.		DWG. NO.
		C5.2
		SHT. 3 OF 3

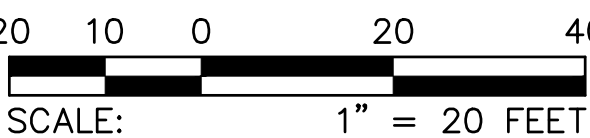
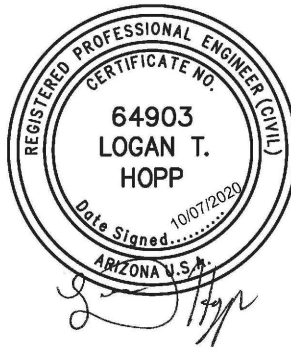


PAVING CONSTRUCTION NOTES.

- SAWCUT, REMOVE AND REPLACE EXISTING PAVEMENT PER MAG SPEC 336 AND C.O.P. DTL P1200 TYPE B, OR REPLACE IN KIND, WHICHEVER IS GREATER. 13 SY
- PAVEMENT RESTORATION. CRACK/MICRO SEAL 25' EACH SIDE OF TRENCH, CUT FROM EDGE OF PAVEMENT TO MEDIAN, PER C.O.P. STREET PAVEMENT CUT POLICY. 492 SY
- CONSTRUCT DRIVEWAY PER C.O.P. STD DTL P1255-1, WIDTH AS NOTED. 1 EA
- CAUTION! EX. UNDERGROUND UTILITY. CONTRACTOR TO VERIFY LOCATION AND DEPTH PRIOR TO TRENCHING.
- CAUTION! EXISTING ELECTRICAL VAULT. CONTRACTOR TO PROTECT IN PLACE. IF DAMAGED REPAIR/REPLACE IF NECESSARY.
- MATCH EXISTING.

NOTES:

- ALL DIMENSIONS ARE TO FACE OF CURB UNLESS NOTED OTHERWISE.
- ADD 1,400 TO ALL TRUNCATED ELEVATIONS. REFER TO BENCHMARK ON SHEET 7.0 FOR FULL COP DATUM.
- REFER TO GRADING & DRAINAGE PLAN, JOB #2242.01 BY HILGARTWILSON FOR ONSITE IMPROVEMENTS.



ROADRUNNER SCHOOL - PVUSD
3602 E. CHOLLA ST.
PHOENIX, ARIZONA 85028

PAVING PLAN

PROJ. NO.	2242.01	
DATE:	OCT 2020	
SCALE:	1" = 20'	
DESIGNED: DB	DRAWN: CM	APPROVED: LH
REV.		DWG. NO.
		C7.1
		SHT. 2 OF 2